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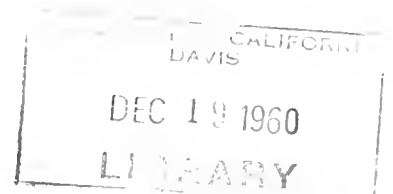
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BULLETIN NO. 91 - 2

DATA ON WATER WELLS AND SPRINGS
IN THE
YUCCA VALLEY-TWENTYNINE PALMS AREA,
SAN BERNARDINO AND RIVERSIDE
COUNTIES, CALIFORNIA

PREPARED BY
UNITED STATES DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY



FEDERAL-STATE
COOPERATIVE GROUND WATER INVESTIGATIONS

JUNE 1960

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DEPARTMENT OF WATER RESOURCES

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This report is one of a series of open file reports prepared by the United States Department of Interior Geological Survey, Ground Water Branch, which present basic data on wells obtained from reconnaissance surveys of desert areas. These investigations are conducted by the Geological Survey under a cooperative agreement whereby funds are furnished equally by the United States and the State of California. The reports in this Bulletin No. 91 series are being published by the Department of Water Resources in order to make sufficient copies available for use of all interested agencies and the public at large.

Water Resources Division
Ground Water Branch
2929 Fulton Avenue
Sacramento 21, California

May 18, 1960

Mr. Harvey O. Banks, Director
California Department of Water Resources
P. O. Box 388
Sacramento 2, California

Dear Mr. Banks:

We have the pleasure to transmit herewith, for publication by the Department of Water Resources, U. S. Geological Survey report, "Data on Water Wells and Springs in the Yucca Valley-Twenty-nine Palms Area, San Bernardino and Riverside Counties, California," by J. S. Bader and W. R. Moyle, Jr. This investigation was conducted and the report prepared in accordance with the cooperative agreement between the State of California and the Geological Survey.

This report, one of a series for the Mojave Desert region prepared by the Long Beach subdistrict office, tabulates all available data on wells and springs in the area from Yucca Valley to Twenty-nine Palms and shows reconnaissance geology with special reference to the water-yielding deposits.

Sincerely yours,

Harry D. Wilson, Jr.
Harry D. Wilson, Jr.
District Engineer

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DATA ON WATER WELLS AND SPRINGS IN THE YUCCA VALLEY-
TWENTYNINE PALMS AREA, SAN BERNARDINO
AND RIVERSIDE COUNTIES, CALIFORNIA

By J. S. Bader and W. R. Moyle, Jr.

PURPOSE AND SCOPE OF THE STUDY

The desert areas of southern California, of which the Yucca Valley-Twenty-nine Palms area is a part (fig. 1), are regions of

Figure 1. Map of part of southern California.

barren mountain ranges surrounding broad valleys or basins which have been partly filled by alluvial deposits derived from the surrounding highlands. These basins contain ground water having a wide range of chemical quality, which is potentially available for development as irrigation, industrial, and domestic supplies. The objective of the investigation was the collection and tabulation of all available hydrologic data for use in planning orderly development and utilization of the ground-water resources, as well as providing a basis for subsequent detailed ground-water studies.

Fieldwork by the U. S. Geological Survey in the area has included:

(1) Very brief reconnaissance of the major geologic features to define the extent and general character of the water-bearing deposits that contain ground water; (2) examining virtually all the water wells in the area to determine and record their locations in relation to geographic and cultural features and the public-land net, and recording well depths and sizes, types and capacities of installed pumping equipment, uses of the water and other pertinent information; (3) measuring the depth to the water surface in wells below an established and described measuring point at or near the land surface; (4) selecting representative wells to be measured periodically in order to detect and record changes of water levels; and (5) collecting and assembling well records, including well logs, water-level measurements, and chemical analyses.

The study has been conducted by the U. S. Department of the Interior, Geological Survey, as a part of the cooperative program with the California Department of Water Resources to investigate the ground-water resources of the desert area. Fieldwork and preparation of the report have been under the general supervision of H. D. Wilson, Jr., district engineer, in charge of ground-water investigations in California, and under the immediate supervision of Fred Kunkel, geologist in charge of the Long Beach subdistrict office.

LOCATION AND GENERAL FEATURES OF THE AREA

The Yucca Valley-Twenty-nine Palms area as described in this report (fig. 2) covers about 660 square miles and, in general,

Figure 2. Map of the Yucca Valley-Twenty-nine Palms area, California.

includes Warren, Copper Mountain, and Twenty-nine Palms Valleys and parts of Means, Ames, Surprise, and Bessemer Valleys. (After Thompson, 1929, pls. 7, 8, and 11.)

The area of this study is in the southern part of the Mojave Desert region between $116^{\circ}00'$ and $116^{\circ}30'$ west longitude and $34^{\circ}00'$ and about $34^{\circ}37'$ north latitude. The western boundary corresponds with the eastern edge of Morongo Valley after Bader and Moyle (1958) and part of Lucerne Valley after Riley (1956). The eastern boundary is about 3 miles east of the center of Twenty-nine Palms, Calif., at the $116^{\circ}00'$ west longitude line. The northern boundary of the area corresponds to the southern limit of the Twenty-nine Palms Marine Corps Training Center.

The area is shown on all or parts of the following Geological Survey topographic quadrangle maps: Joshua Tree, Twentynine Palms, Emerson Lake, Deadman Lake, and Lavic Lake, all at a scale of 1:62,500; and Twentynine Palms, Deadman Lake SW, Deadman Lake SE, Emerson Lake, Goat Mountain, and Galway Lake, all at a scale of 1:24,000. Access to the area is provided by the Twentynine Palms Highway and Old Woman Springs Highway, as well as many unpaved roads.

Geographically the area is one of interior drainage with no perennial streams. The principal landforms are broad alluvial fans and alluvial plains built out from the eastern slopes of the San Bernardino Mountains and northern slopes of the Little San Bernardino Mountains. Isolated hills and small mountains locally rise to moderate heights above the valley floor.

The major water-bearing units in the area are the alluvial deposits which underlie the fans and fill local structural depressions to varying depths. The water-bearing deposits consist generally of lenticular beds of sand, gravel, silt, and clay, except near the mountains where they consist principally of coarse-grained angular rock detritus.

Water levels in wells in the Yucca Valley-Twentynine Palms area range from near land surface to more than 500 feet below the land surface. Near Mesquite Lake, north of Twentynine Palms, and at the Oasis of Mara, just south of Twentynine Palms, a few wells flow continuously or intermittently.

Movement of ground water through the area is impeded locally by ground-water barriers which are presumed to be major faults. These barriers separate the main valley areas into smaller ground-water basins. The displacement of the water level across the barriers is locally as great as 240 feet.

Replenishment of ground water is mainly by infiltration of runoff from the eastern slope of the San Bernardino Mountains and northern slopes of the Little San Bernardino Mountains. Infrequently, a small amount of recharge also originates as deep penetration of rain on the valley floor.

A total of 516 wells and springs were inventoried in the area, most of which are listed in table 1 and are shown on figure 2. Those omitted from the table were destroyed wells for which no data are available.

Table 2 is a cross index giving the Geological Survey well numbers and the numbers given previously to the same wells by other agencies. Table 3 includes all known water-level measurements in those wells and table 4 includes drillers' logs of wells. Table 5 includes chemical analyses of water from wells. Table 6 lists the fluoride content of water from wells.

Twentynine Palms has long been known as an oasis and watering place; however, according to Thompson (1929), there were no permanent residents in the area prior to 1918, and only a few hundred prior to 1952. Since the construction of the Twentynine Palms Marine Corps Training Center in 1952 the population of the area has increased greatly.

The towns of Twentynine Palms, Joshua Tree, and Yucca Valley obtain their water supplies from several publicly owned and many private domestic wells. Because it is uneconomical to drill domestic wells in many parts of the area, residents of many scattered recreational homesites purchase their domestic water from outside sources; usually delivery is made by tank truck.

PREVIOUS WORK AND ACKNOWLEDGMENTS

Data on ground water in the Yucca Valley-Twenty-nine Palms area are contained in reports by Thompson (1929), the San Bernardino County Flood Control District (1951, 1954, and 1958), and the California Department of Water Resources (1958).

The writers wish to acknowledge the cooperation given by the many ranchers, well owners, well drillers, and other persons visited during the investigation. The California Department of Water Resources, the San Bernardino County Flood Control District, and Mr. W. B. Hatch, licensed land surveyor, Twenty-nine Palms, Calif., made available all the pertinent information in their files, including numerous well logs, water-level records, chemical analyses, and surveyed altitudes. The cooperation and assistance given by these people and agencies contributed materially to this report.

WELL-NUMBERING SYSTEM

The well-numbering system used in the area covered by this report is that used by the Geological Survey in California since 1940. It has been adopted by the California Department of Water Resources and by the California Water Pollution Control Board for use throughout the State.

Wells are assigned numbers according to their locations in the rectangular system for the subdivision of public land. For example in the number 1N/5-35N1, which was assigned to the domestic well of T. J. Scarvan, the part of the number preceding the slash indicates the township (T. 1 N.); the number following the slash the range (R. 5 E.); the number following the hyphen the section (sec. 35); and the letter following the section number the 40-acre subdivision of the section as shown in the diagram below.

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Within the 40-acre tract the wells are numbered serially as indicated by the final digit. Thus, well 1N/5-35N2 is the second well to be listed in the $SW\frac{1}{4}SW\frac{1}{4}$ sec. 35. Because the area lies on both sides of the San Bernardino base line the letters N and S are used to indicate whether the township lies north or south of the line. The letters E and W are omitted from the ranges because the area lies entirely east of the San Bernardino meridian line.

For well numbers where a Z has been substituted for the letter designating the 40-acre tract, the Z indicates that the well is plotted from unverified location descriptions. The indicated sites of such wells were visited but no evidence of a well could be found.

Springs are numbered in the same way as wells, except that the number following the letter designating the 40-acre subdivision has been replaced by the letter s.

REFERENCES

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- Jenkins, O. P., 1938, Geologic map of California: Calif. Div. of Mines.
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- San Bernardino County Flood Control District, 1951, Hydrologic and climatic data, v. 2, 1947-1950: Mimeo. rept., p. 177-183.
- _____, 1954, Hydrologic and climatic data, v. 3, 1950-51 and 1951-52: Mimeo. rept., p. 146-149.
- _____, 1958, Hydrologic and climatic data, v. 4, 1952-53 and 1953-54: Mimeo. rept., p. 170-174.
- Thompson, D. G., 1929, The Mohave Desert region, California: U. S. Geol. Survey Water-Supply Paper 578, p. 642-648.

Table 1.--Description of wells and springs in the Yucca Valley-Twenty-nine Palms area,
San Bernardino County, Calif.

USGS number: The number given is the Geological Survey number assigned to the well according to the method described in the section on the well-numbering system.

Date of observation: The date given is the date on which the well was visited during this investigation.

Owner or user: The name given is the owner or user of the well on the date indicated. In some cases a local name was given to a well and it also is given.

Year completed: The year given is the date the well was completed and was obtained from the driller's log or was reported by the owner or others.

Depth: Depths of wells given in whole feet were reported by owners, drillers, or others; depths given in feet and tenths were measured below land-surface datum by the Geological Survey.

Type and diameter: Type of well construction is indicated by the following symbols: C cable tool, Cd cable tool hole drilled in bottom of dug pit, D dug, R rotary. The number following the letter is the diameter of the casing or pit, in inches, except where the well is not cased and the symbol N is used.

Pump type and power: The type of pump or method of lift is indicated as follows: B bucket, J jet, L lift, N none, S submersible, T turbine. The type of power is indicated as follows: D diesel, E electric motor of undetermined horsepower (where a number appears in this column it indicates the rated horsepower of an electric motor), G gasoline engine, H hand operated, N none, W windmill.

Use: Dm domestic, Ds destroyed or dry, I irrigation, Ps public supply, S stock, T test, Un unused.

Measuring point: The point from which water-level measurements by the Geological Survey are made is described

as follows: Ah access hole

Ls land surface

Bbc bottom of board cover

Na no access into casing

Bcl bottom of clamp

Tap top of access pipe

Bnc bottom of notch in casing

Tbc top of board cover

Bpb bottom of pump base

Tc top of casing

Hcc hole in casing cover

Tcc top of casing cover

Hpb hole in pump base

Tcl top of clamp

Hsc hole in side of casing

Tcr top of curbing

The suffix letters N, S, E, and W indicate the side, north, south, east, or west, from which the measurement is made. The distance of the measuring point above or below (-) land-surface datum is given in feet and tenths and sometimes hundredths.

Altitude: The altitude given is the altitude of land-surface datum, the plane of reference at the well.

Altitudes given to the nearest foot were interpolated from Geological Survey topographic maps having 40-foot contour intervals. Altitudes given to the nearest tenth of a foot were determined by spirit leveling by W. B. Hatch, licensed land surveyor, Twentynine Palms, Calif.

Depth to water: Measured depths to water level are given in feet, tenths, and hundredths, or feet and tenths; reported or approximate depths to water level are given in whole feet. The water-level measurements given are below land-surface datum; that is, the difference in altitude between land-surface datum and the measuring point has been subtracted from or added to the measured water level below or above the measuring point. The measurement given is the depth to water below or above (+) land-surface datum.

Other data: C chemical analysis of water is given in table 5, L driller's log of well is given in table 4, W additional water-level measurements are given in table 3.

USGS number	Date of observa- tion	Owner or user	Well data				Measuring point	Altitude of 1st (feet)	Water level	Other data
			Year com- pleted	Depth (feet)	Type, diam- (feet)	Pump eter: and power:				

T. 1 N., R. 5 E.

1N/5- 2K1	1-22-58		(a)	160.0	C 11	N N		3,520		Dry	
2N1	1-22-58 2-11-53 2- 6-53 8- 6-52	The Windmill			C 8	L W	S	Tc 1.5	3,540	70.54 69.00 69.09 67.93	C
6H1	1-22-58				2	L W	Un	Na	4,140		
10B1	1-23-58 5- 2-53 2-11-53	F. Gullick		135.0	Cd 8	L W	Dm	TcS 2.5	3,620	118.56 115.58 116.44	
10E1	1-22-58 2-11-53	Two Windmills Rancho		120.5	Cd 12	L W	Ds		3,660	Dry 108.50	
10E2	1-23-58	do.		101.3	C 10	N W	Ds		3,660	Dry	
12D1	1-23-58	O. B. Harrod	1956	300	R 8	T G	Dm	Tap .5	3,620	251.62	C,L
14A1	1-23-58	C. L. Gleason	1957	204.0		N N	Ds		3,690	Dry	L

USGS number	Date of observa- tion	Owner or user	Well data				Measuring		Altitude		Water	
			Year com- pleted	Depth (feet)	Type, diam- eter	Pump type and power	point	of lsd (feet)	Depth below lsd (feet)	level	Other data	
T. 1 N., R. 5 E.--Continued												
1N/5-24B1	2-12-58	Battison	(a)	138.8	C 8	N N	Un	Tc	3.0	3,670		131.54
24F1	2-12-58	Anna H. Bishop	1957	108	C N	N N	Ds			3,700		Dry
24K1	1-24-58	Warren	1952	215.2	R 8	N N	Ds			3,720		Dry
27C1	1-24-58	John Conzelman	1937	121.0	C 8	L G	Dm	BpbE	1.0	4,100		66.90
27D1	1-23-58	Bruce Burns	1950	208	C 8	L W	Dm	Na		4,110		80
28M1	2-12-58	Fred Sanders	1948	210	C 8	L 3/4	Dm	TcE	3.0	3,640		75.3
28N1	2-12-58	Hollar			C 8	J 1	Dm	TcS	2.0	3,620		127.34
28P1	2-12-58	René Mellette	1957	225	C 8	S 1/2	Dm	Na		3,630		130 L
28Q1	2-12-58	Gartlier				L 3/4	Dm	BpbE	2.0	3,595		131.14
33J1	2-13-58	O. L. Lasley	1956	310	C 8	S E	Dm	TcN	1.5	3,400		b221.67 L
33Q1	2-13-58	J. W. Yale		305	C 10	T c30	I	Tap	1.0	3,310		190.82

34F1	2-14-58 4-5-48 11-13-47 4-15-47	H. S. Baker do. do. do.			10	S	E	Dm	TcW Ebc	2.74 1.5	3,450	108.75 104.40 103.60 98.35
34K1	2-25-58	Yucca Valley Water Co.	1947	378		T	30	Ps	HpbE	.92	3,375	300.85 C,W
34N1	2-13-58	J. W. Yale	1956	286	C 10	T	e20	I	Tap	1.0	3,315	207.12 L
34N2	2-13-58	do.	1956	315	C 12	N	N	Un	Tc	0	3,315	206.56
34P1	2-13-58	Old Yucca Valley School			9	N	N	Un	Na		3,340.4	W
34P2	2-13-58				C 8	N	N	Un	Na		3,350	
34R1	2-14-58	E. C. Hardesty	1941	265	C 8	N	N	Un	Hcc	1.5	3,305.1	W
35M1	2-20-58	Gordon Geiger	1946	234	R 8	L	W	Dm	HccS	1.0	3,300	184.30
35N1	2-14-58	T. J. Scarvan			8	L	G	Dm	Hcc	1.25	3,296.6	180.24 W
35N2	2-14-58	W. C. Gunn	1942	230	C 8	L	1 1/2	Dm	TcS	1.5	3,300	187.47
36H1	2-20-58	J. A. Bendall (Warren's Well)		160	10	L	W	Dm	HccN	.83	3,210.5	116.06 C,W
36J1	2-20-58					L	G	Un	Na		3,250	
36K1	2-20-58	Joshua Forest Water Co.	1946	333	10	T	50	Ps	Tap	1.38	3,230	127.51 W

a. Being drilled in 1958.

b. Pumping.

c. Reported to pump about 340 gpm.

d. Measurement by San Bernardino County Flood Control District.

e. Reported to pump about 155 gpm.

USGS number	Date of observa- tion	Owner or user	Well data				Measuring point	Altitude of lsd (feet)	Water level Depth below lsd (feet)	Other data
			Year com- pleted	Depth (feet)	Type; diam- eter	Pump; type and power				
T. 1 N., R. 6 E.										
1N/6- 1JL	5-23-58	Samuel Krantz	1958	173	C N	N N		2,800	Dry	L
1P1	2-20-58	do.	1958	625	C N	N N		2,890	Dry	L
4K1	2-21-58	W. D. Jenkins	1946	780	R 12	L G	Dm Na	3,195	460	
4Q1	2-21-58	J. W. Boldman	1946	726	R 8	L G	Dm HccW 0.5	3,190	457.33	C, W
6E1	2-21-58 5- 2-23	L. R. Rodda		316	C 6	L G	Un Hsc 1.02	3,460	242.40 216.8	C
9Q1	2-20-58	Mogle Brothers	1947	529.3	C 16	L N	Un TcN .28	3,220	398.32	L, W
9Q2	2-21-58	do.		414.5	5	N N	Un Tcr 1.5	3,220	261.47	W
10F1	2-21-58	R. K. R. Reiterer		385	8	L W	Dm Tc1 1.22	3,100	243.06	C, W
13D1	2-25-58	J. Stanolind	1949	613	C 12	L f15	Ps	2,840	475	C
13K1	2-25-58	do.	1954	479.2	C 12	N N	Ds	2,735	Dry	L
13R1	5-20-58	do.	1956	715	C 12	N N	Un Tc 1.5	2,650	333.9	L

18Fl	2-25-58	J. E. Wilde	55.5	D 60	Ds	3,480	Dry
22El	2-25-58		10.0		Ds	3,100	Dry
24Kl	2-26-58	Roland Shreves	(a)	C		2,680	
25Cl	4-23-58		1957	C 12 N N Un Na		2,760	
25Kl	2-26-58	Lacy and Richardson	1957	C 12 N N Un Tap 1.5		2,700	389.04 L
25Ml	2-26-58	Joshua Tree Service Co.	1936	C 12 T 75 Ps		2,714.4	408 C,W
25Ql	2-26-58	Smith Ranch	1947	C 6	Dm	2,715	400
26Nl	2-26-58	L. P. Wikoff	1949	C 12 S 15 Dm Tap 1.0		2,850	542.89 C
28Kl	5-1-53 4-16-47	Mentalphysics	260	C 10 T 10 Un Bpb 3.0		3,035	216.67 a213.62
28Ll	2-26-58	do.		C 12 S 7½ Dm, I HecN 1.0		2,970.0	211.43 W
28Nl	2-26-58	do.		10 S 40 I HecS-3.75		3,110	332.72
29Hl	2-27-58	H. W. George	92.1	C 8 N N Ds		3,150	L
29Jl	2-27-58	do.	0	C	Ds	3,110	L
29J2	2-27-58	do.	1947	6 L W Dm		3,120	80
29Ll	2-26-58	Rancho Ramon Water Co.	1953	C 12 T 7½ Ps HpbE .7		3,160	178.13 C,L,W
29Nl	2-26-58 4-24-57	do.	1954	C 12 T 40 Ps Hsc 1.0		3,190	240.41 C,L a235.33

d. Measurement by San Bernardino County Flood Control District.

f. Reported to pump about 80 gpm.

a. Being drilled in 1958.

USGS number	Date of observa- tion	Owner or user	Well data					Measuring point	Altitude of 1st (feet)	Water		Other data
			Year com- pleted	Depth (feet)	Type, diam- eter, and (in.) power	Pump type	Use			level	Depth below 1st (feet)	

T. 1 N., R. 6 E.---Continued

1N/6-29R1	2-27-58 4-23-57	J. H. Ashburn	1948	306	8 L W	Dm	Hcc	1.23	3,140	b255.29 d251.00		
29R2	2-27-58	Lafferty	1948	307.6	8 L N	Un	TcW	1.23	3,150	263.34		
30N1	2-27-58	June Paxton	1940	260	C 8 L W	Dm	Tc1	1.0	3,270	161.84		
30N2	2-27-58	Charles Gross	1948	210	C 9 L 1½	Dm	TcS	.5	3,280	179.88		
31F1	2-27-58				6 L G	Un	Na		3,220	162		
31L1	2-27-58			146.8	8	Ds			3,240	Dry		
31P1	2-27-58	Ralph Fowler	1949	325	4 L 3	Dm	Hsc	.5	3,280	292.20		C,W
35C1	3-26-58	Lloyd Land Co.	1951	630	C 12 S g7½	Ps	Tc	.1	2,830	512		C,L

T. 1 N., R. 7 E.

1N/7- 6E1	3-26-58		1958			Dm			2,790			
7P1	2-25-58	J. Stanolind	1954	475	C 12 N N	Un	Tap	.5	2,630	434.04		
10E1	3-27-58	Lyle Robinson	1952	264	Ca 12 T 5	Dm			2,390	194		

10N1	3-27-58	Edna Reagan	1949	267	C 6	L W	Dm		2,385	213	C, L
10P1	3-27-58	Fred Pickett	1956	281	C 8	L G	Dm		2,380	205	L
14N1	6- 3-58	U. S. Navy	1943	450	12		Un	Tc .9	2,359	184.44	L, W
16P1	3-27-58	L. V. Peterman	1947	360	C 16	T 20	Ps	Tap .1	2,440	274.34	C
16P2	3-27-58	do.	1952	328	C 12	T 10	Ps	Na	2,440	274	L
20A1	3-27-58	Burns		0	D	N N	Ds		2,480		
20Q1	3-27-58	Fred LaFerney		400	6	L 3	Dm		2,550	286	
21J1	3-27-58	Crawford		274	6	L W	Dm	TcE 0	2,440	268.40	W
21N1	3-27-58	Hollinger	1939	408	8	L W	Dm	Na	2,510	348	
21Q1	3-28-58 4-16-47	C. L. Zastrow M. J. LaHaye		300	7	L 1	Dm	Na	2,460	a285.90	
22E1	3-27-58	L. V. Peterman	1946		C 6	N N	Un	Hcc .4	2,425	259.08	W
22L1	3-27-58	Ann Webb	1928	251	C 10	L 2	Dm	Hcc .1	2,405	231.95	
23N1	3-31-58	H. O. Lovegren	1955	230	R 6	S 1½	Dm		2,380	165	L
23P1	3-31-58 4-11-50 4- 7-48 11-17-47	C. Hallstead Cain	1947	429	12	L D	Dm		2,375	a205.43 a205.22 a205.86	
25E1	4- 1-58	T. L. Brooks	1956	250	C 8	S 1½	Dm	Tap 4.2	2,480	167.10	L

b. Pumping.

d. Measurement by San Bernardino County Flood Control District.

g. Reported to pump about 40 gpm.

USGS number	Date of observa- tion	Owner or user	Well data				Measuring		Altitude		Water	
			Year com- pleted	Depth (feet)	Type, diam- (in.)	Pump, type eter, and power	point	of 1st (feet)	Depth below 1st (feet)	Level	Other data	
T. 1 N., R. 7 E.--Continued												
1N/7-26D1	7-22-58	L. V. Evans		250	8	N N	Un	TcW	.97	2,385	211.10	W
26M1	4- 8-58	Clyde Rollard	1946	208	C 8	L G	Dm	Tcl	1.0	2,475	172.91	W
26P1	4- 1-58 4-11-50 4-25-49	Frank Pontius	1949	210	10	T	g10 Dm	Na		2,475	d158.96 d158.07	
27D1	3-27-58	C. M. Cuttler	1949	305	C 8	L 1	Dm			2,435	263	
27E1	3-28-58	F. A. Brownlee	1958	220	C 8	S 1½	Dm	TapE	1.3	2,440	143.22	L
28P1	3-28-58	Paul			8	L 1½	Dm	TcW	.6	2,495	158.10	
28P2	3-28-58	James Blizzard			C 8	J 1½	Dm	Na		2,510		
28P3	3-28-58	Fred Meyers			6	L G	Dm	Na		2,510		
28Q1	3-28-58	M. H. Gilman	1947	412	8	T 7½	Dm			2,480	179	W
28R1	3-28-58 5-28-41	W. H. Lassiter	1929		C		Ds			2,489.5	d187	

28R2	3-28-58 2-12-53 5-28-41 1917	J. Stanolind (Coyote well)	1957	262 170	6	S 1	Dm	Bnc	1.0	2,463.4	159.81 d166.4 170	C,L
30A1	3-28-58	Edna Chesler	1945	318	C 8	L W	Un	Na		2,610		
30P1	7-22-58 2-26-58 4-24-57	J. M. Leach	1952	430	C 12		Un	TcS	1.2	2,670	367.38 367.41 d367.31	L
32C1	3-28-58 4-24-57	E. A. Thurlow	1952	392	C 8	L 1½	Dm	Tap	.9	2,620	304.46 d302.7	L
32L1	3-28-58	do.		70	C	N N	Ds			2,830		
33B1	3-28-58	W. A. Thompson	1952	292	C 8	L 2	Dm	Na		2,540	236	L
33B2	3-28-58	Walter Glass	1957	314	C 8	S E	Dm	Tap	1.2	2,540	228.48	L
33C1	3-28-58	E. W. Hall			12	L 2	Dm	Na		2,540	232	W
34K1	3-31-58	Hansen	1936	370		N N	Ds			2,660		
35D1	4- 1-58 2-16-51	R. E. Sturdevant	1951	256	C 12	T G	Ps	Tc	1.0	2,485	180.14	C,L
35N1	4- 1-58	do.	1955	45	R 6	N N	Ds			2,780		

T. 1 N., R. 8 E.

1N/8-1A1 4- 3-58
4-27-52

103 12 L G Un TcS .6 1,850 70.53
69.65

d. Measurement by San Bernardino County Flood Control District.

g. Reported to pump about 40 gpm.

USGS number	Date of observa- tion	Owner or user	Well data				Measuring point	Altitude		Water	
			Year com- pleted	Depth (feet)	Type, diam- (feet)	Pump type eter: and (in.): power:		of lsd (feet)	Depth below lsd (feet)		

T. 1 N., R. 8 E.--Continued

1N/8- 1B1	4- 3-58	Royer			10 L W	Un	BncW 0.4	1,890	125.21	W	
1D1	4- 2-58	H. L. Cartwright	1934	212	8 L W	Dm	Tap 1.8	1,951.0	bl67.81	C, W	
1R1	4- 3-58	Lawrence Stillwell	1953	150	C 8 L 1	Dm	Na	1,915			
2N1	4- 2-58		1958		C 6 S 1	Dm	Na	2,140			
9L1	4- 2-58	W. D. Fulton	1956	386	C 6 S 3	Dm		2,179.6	322	C, W, L	
9M1	4- 2-58	C. R. Wolf	1957	380	C 8 T G	Dm	Tap 1.0	2,150	291.30	L	
11L1	4- 2-58	G. C. Goemans	1956	460	C 10 L 2	Dm	Tap .4	2,180	367.78	L	
12G1	4- 3-58	William Hockett	1931	420	C 12 L W	Dm	Tc 1.0	1,972.7	196.86	C, W	
12R1	4- 3-58	Dr. Drown	1956	246	C 8 S 1	Dm	Hcc .5	1,955	186.42		
17A1	4- 1-58	M. L. Richardson	1957	367	C 8 L G	Dm		2,170	307		
17A2	4- 2-58	do.	1957	97	C N N N	Ds		2,170			
21F1	4- 2-58	G. A. Rubens	1948	350	12 L N	Un		2,160	315	W	

21HL	4- 2-58					R 6	L N	Un		2,140		
25R1	4- 3-58	Pacific Coast Land Co.	1936				N N	Ds		2,129.5		C,L
26G1	4- 3-58	Wm. Schultze	1940	603		12	L N	Un		2,414.0	473	C,L,W
31A1	4- 1-58 4-24-57	George Allen	1956	299		8	L W	Dm	Na	2,485	225 d224.67	
31K1	4- 1-58	C. H. Peterson		455		8	S E	Dm	Na	2,640	387	C
32C1	4- 1-58	G. M. Graham	1948	295		C 8	S 3	Dm	Hcc 0	2,510	252	
33A1	4- 2-58	Twentynine Palms County Water District	1956	350		C 10	T 25	Ps		2,515	248	L
33R1	4- 3-58	Twentynine Palms County Water District	1956	550		C 10	N N	Un	Tap .8	2,685	365.6	L
36A1	4- 3-58	Twentynine Palms County Water District	1936	292		C 12	T 40	Ps		2,129.7	142	C,W
T. 1 N., R. 9 E.												
1N/9-4N1	4- 4-58	A. Krushat	1934	136		9	N N	Un	TcS 1.0	1,786.9	21.38	W
4N2	4- 4-58	do.		19.0		12	N N	Ds		1,787.4	Dry	W
4N3	4- 4-58	U. S. Navy	1941	500		C 14	N N	Un	Tap .4	1,787	12.83	C,W
5G1	4- 8-58	U. S. Navy	1941	500		14	T h25	Ps		1,779		
5M1	4- 8-58	Alice Critchfield	1949	60		C 8	J $\frac{1}{2}$	Dm		1,800		W
5M2	4- 8-58	C. L. Toppin	1948	80		C 8	J $\frac{1}{2}$	Dm	Na	1,795		

b. Pumping.

d. Measurement by San Bernardino County Flood Control District.

h. Reported to pump about 800 gpm.

USGS number	Date of observa- tion	Owner or user	Well data				Measuring		Water	
			Year com- pleted	Depth (feet)	Type, Pump diam.: type eter: and (in.): power		point	Altitude of lsd (feet)	Depth below lsd. (feet)	Other data
					Use	Use				
T. 1 N., R. 9 E.--Continued										
1N/9- 5M3	7- 9-52	J. W. Schopp	1948	80	C 8	J $\frac{1}{2}$	Dm	Tc 1.0	1,800	j27.75
5M4	4- 8-58	Glass				J $\frac{1}{2}$	Dm		1,800	
5M5	4- 8-58	J. P. Mathews	1957	60	C 8	J $\frac{1}{2}$	Dm	HccS 1.5	1,800	21.7
5Q1	4- 8-58	M. C. Elliott	1941	103	C 8	N N	Un	Tc 1.7	1,788.2	19.21 C,L,W
5Q2	4- 8-58	Frank Rhode		110	8	T G	Un	BpbN 1.2	1,800	28.39 C,W
5Q3	4- 8-58	do.		45		J $\frac{1}{2}$	Dm	Na 1,795	25	C
5Z1	4- 8-58	M. C. Elliott					Ds	1,788.2		W
6E1	4- 8-58	H. C. Marshall		120	8	L W	Dm	Hcc .92	1,840	63.56 W
6E2	7-24-58	do.			C	L E	Dm	Na 1,840		W
6H1	4- 8-58	Murfield				J $\frac{1}{2}$	Dm	Na 1,810		
6J1	4- 8-58	Daisy Bright		65	8	J $\frac{1}{2}$	Dm	Tc1 1.4	1,820.1	46.21 W
6J2	4- 8-58	J. Icardo	1951	75	C 6	J $\frac{1}{2}$	Dm	Tc .5	1,820	34.12

6J3	4- 8-58	Moser		C	J $\frac{1}{2}$	Dm	Na	1,820	
6J4	4- 8-58	Paso			J $\frac{1}{4}$	Dm		1,810	
6J5	4- 8-58	Jardine			J $\frac{1}{2}$	Dm		1,820	
6K1	4- 8-58	Alice Mason	45	2	L H	Un	Na	1,820	40
6L1	4- 8-58	A. L. Bugbee				Dm		1,855	
6M1	4- 2-58	R. J. Bullard	1932 175	C 8	L W	Dm	Hcc -1.7	1,915	b149.10 C
6P1	4- 8-58 4-28-52	Robert Chin		8	L W	Dm	HccS .9	1,875	100.22 99.31
7B1	4- 8-58		21.2	D	N N	Ds		1,860	Dry
7E1	4- 8-58	Smith	169.0	8	L W	Ds		1,935	C,W
7E2	4- 9-58	C. F. Wupper	1951 186	C 8	L 1/3	Dm	Na	1,925	158 L
7G1	4- 9-58	Vance Johnson		8	L W	Dm	Na	1,887.9	W
7H1	4- 9-58	P. H. Carson	110	8	L W	Dm	Tbc 0	1,843.5	69.25 W
8D1	4- 8-58	H. E. Brown	42.0	D 42	N N	Ds		1,817.7	Dry W
8D2	4- 9-58	do.	70	8	L W	Dm	TcW .75	1,820.3	46.55 C,W
8F1	4- 9-58 4-16-46 4-24-40	Foley	79	8	J $\frac{1}{2}$	Dm	Na	1,835.5	d60.01 d57.40
8F2	4- 9-58	S. K. Taylor	85		J $\frac{1}{2}$	Dm	Na	1,830	

b. Pumping.

j. Pumped recently.

d. Measurement by San Bernardino County Flood Control District.

USGS number	Date of observa- tion	Owner or user	Well data					Measuring:		Altitude: of lsd (feet)	Water		Other data	
			Year com- pleted:	Depth :(feet):	Type, diam- eter:	Pump type and power:	Use	point	Depth below lsd (feet)		level			
T. 1 N., R. 9 E.--Continued														
1N/9- 8G1	4- 9-58 5-30-52	N. Heely	1948	88	8		Dm	Na Tc	1.2	1,825	49.12			
8H1	4- 9-58	P. H. Carson				N N	Ds			1,817.8			W	
8H2	4- 9-58	do.		72.5	6	N N	Un	Tc	.73	1,815	46.12		C, W	
8J1	4- 9-58 11-18-49 4-29-49 11-18-48	H. T. Alsip	1948	85	C 6	J $\frac{1}{2}$	Dm	Na		1,825	52.04 53.45 52.45			
8J3	7-14-58					N N	Un	Na		1,815				
8K1	4- 9-58	John Crom	1953	130	C 8	L W	Dm	Na		1,825				
8K2	4-10-58	Edward Didsbury	1958	100	C 8	J 1	Dm	Na		1,830				
8K3	4-10-58	Peter Thomas	1956	102	C 8	S 1	Dm	Tc	1.5	1,830	54.71			
8L1	4- 9-58			68.5	D 60	N N	Ds			1,850	Dry			
8L2	4- 9-58	Edna Howell	1949	147	C 8	L $\frac{1}{2}$	Dm			1,835				
8Q1	4- 9-58	A. J. Lang	1940	92	C 8	L W	Dm	Na		1,835				

8Q2	4-10-58	H. H. Fernald	1953	90	D 36	J 1½	Dm	Na	1,830	56	C
8Q3	4-10-58	C. R. Griffin	1957	108	C 8	J 1	Dm	Hcc	1,835	59.06	L
8R1	4- 9-58 5- 1-52	Ruth Markell		112	12	N N	Un	Tc	1.0	1,825	48.65 49.09
8R2	4- 9-58	Frank Switzer		125		J ½	Dm	Na	1,825		
8R3	4- 9-58	William Watkins	1957	90	C 8	S 1/3	Dm		1,825	53	
8R4	4- 9-58	do.	1946	65	D	N N	Ds		1,825		
8R5	4- 9-58	L. A. Crow	1958	100	C 8	J ½	Dm		1,825	54	
8R6	4- 9-58	Frank Stewart	1946		C 8	J ½	Dm	Na	1,830		
9A1	4-10-58	A. C. DePuydt		500	8	T G	Dm	BpbW	1.5	1,815	261.82
9F1	4-10-58	Dawn Renner		17.5	D 36	N N			1,792.2	Dry	C,W
9M1	4-10-58	Orin Taylor		60	12	N N	Un	Tc	1.2	1,810.4	37.69
9M2	4-10-58	do.	1946	78	12	J ½	Un	Tc	2.0	1,810	38.01
9N1	4-10-58 5- 1-52	H. E. Brown Matthews		56.0	8	J 1	Un	Tc	.5	1,815	41.29 36.96
9P1	4-10-58	H. E. Brown			10	L W	Ds		1,800	Dry	W
9Q1	4-10-58	Eugene Moffett		48.0	10	N N	Un	Tc	1.5	1,800	15.39
9Q2	4-10-58	do.		21	8	L W	Dm	Tap	.8	1,782.8	18.25
9Q3	4-10-58	D. G. Martin		30	10	J E	Dm	Tc	.5	1,800	20.6

d. Measurement by San Bernardino County Flood Control District.

USGS number	Date of observa- tion	Owner or user	Well data				Measuring point	Altitude of 1sd (feet)	Water		Other data	
			Year com- pleted	Depth (feet)	Type, Pump diam-:type eter: and (in.):power				Use	Altitude of 1sd (feet)		Depth below 1sd (feet)
T. 1 N., R. 9 E.--Continued												
1N/9-10C1	4-10-58	Rolland Shank	1930	239.0	C	N N	T		1,815			
10D1	4-10-58	C. F. Taylor	1937	301	C 6	N N	Un	Tc	1.0	1,815	275.98 C,W	
14D1	4-11-58	F. A. Kavanaugh		312	C 10	L W	Dm	Tc	2.05	1,805	255.45 W	
14D2	4-11-58 11-17-49	Ernest D'Andria Perkins	1950	285	8	L G	Dm			1,790	254 2249.30	
14L1	4-11-58	Kellerbrock		228	C 8	N N	Un	Tc	.9	1,755	211.30 W	
15G1	5-20-58	3-Mile Corp.		0		N N	Ds			1,800	C	
15N1	4-11-58	Hamilton Sales Co.	1950	312	12	T 40	Ps			1,800	C	
15N2	4-11-58					L N	Ds	Na		1,800		
16B1	4-10-58	Wm. Crist		60	D 60	B H	Dm	Tc	1.0	1,800	19.67	
16D1	4-16-58	E. B. Ranch	1933	96	Cd 60	L W	Dm	Tc1	1.0	1,815	648.52 C,W	
16E1	4-16-58 5- 1-52	E. W. Mosley	1940	108	C 8	J $\frac{1}{4}$	Dm	Tc	1.5	1,815	38.40 41.43	

16E2	4-16-58 5-1-52	Peter DeWinter Joyce	125	8	J 1	Dm	Na Tc	2.6	1,815	40.61
16G1	4-11-58	Farrington	156.0	12	N N	Un	Tc	.4	1,800	10.61 C,W
16H1	4-11-58	do.	56	D 12	N N	Un	Bbc	-.15	1,800	14.93 W
16H2	4-11-58 5-7-52	do.		D 6	L N	Un	Tbc	.5	1,800	13.51
16M1	5-1-52	Anthony Palumbo	1946	C 8	J 1½	Dm	Tc	.8	1,810	42.49
16N1	4-16-58 5-28-52			8	N N	Ds	Tc	2.6	1,810	Dry 42.30
16N2	4-16-58		1952	C 48	J ½	Un	Tc	.5	1,810	42.34
16P1	4-11-58 4-25-57	Wm. Forman		D 48	L W	Dm	Bcl	.5	1,800	22.43 423.35
17A1	4-16-58			D 60	N N	Ds			1,825	Dry
17C1	4-17-58 4-29-52	James Hill		D 8	L W	Dm	Tcc	1.0	1,845	77.69 74.49
17E1	4-16-58		130	10	L W	Dm	Tcc	.5	1,870	107.91 C,W
17F1	4-17-58	H. Sabol	1957	C 8	S ½	Dm	Na		1,860	88
17F2	4-17-58	Charles Randall	1957	C 8	S ½	Dm	Na		1,860	89
17G1	4-17-58 4-29-52	Stanley Clark	1937	C	J E	Dm	TcN	1.0	1,835	61.40 C 61.12

b. Pumping.

d. Measurement by San Bernardino County Flood Control District.

USGS number	Date of observa- tion	Owner or user	Well data				Measuring		Water	
			Year com- pleted	Depth (feet)	Type, diam- eter, and (in.) power	Pump type and Use	point (feet)	Altitude of lsd (feet)	Depth below lsd (feet)	Other data
T. 1 N., R. 9 E.--Continued										
1N/9-17G2	4-17-58	W. B. Thomas		67.5	D 48	J ½	Dm	Tcr 0.8	1,835	64.32
17G3	4-17-58	V. L. Forndorf	1957	132	8	S ½	Dm	Na	1,830	
17H1	4-17-58 5- 1-52	K. C. Warfield			8	J ½	Un	HpbN 1.9	1,830	54.01 53.08
17H2	5- 1-52	M. V. Fish			6	J 1	Dm	Tcl 1.0	1,830	52.24
17H3	4-16-58 5- 1-52	J. Featherer	1951	110	C 8	L W	Dm	HscS 1.9	1,825	b46.20 45.50
17H4	4-16-58				8	J ½	Un	TcW 1.5	1,825	51.55
17H5	4-17-58			45.0	D 36	N N	Ds		1,825	Dry
17H6	4-17-58	W. E. Maddox	1957	156	C 8	J 1	Dm	Na	1,830	62
17J1	4-16-58	W. Q. Smith	1954	114	C 10	T 15	Ps		1,825	54 C,L
17J2	4-16-58	do.	1928	85	C 8	J 2	Un		1,825	C
17J3	4-16-58 4-29-52	do.	1935	52.0 61.9	C 12	N N	Ds		1,825	Dry k52.15

17J4	4-16-58.	do.	1940	114	C 12	T 15	Ps	Na	1,825	
17J5	4-16-58	do.	1926	0	C 8	N N	Ds		1,825	d51.48
17J6	4-11-47	do.	1948	106	C 8	T 15	Ps	Na	1,825	
17K1	4-29-52	J. Dobler			8	L W	Un	Tc	1.4	66.27
17M1	4-17-58	W. H. Richards		0	12	N N	Ds		1,880	Dry
17Q1	4-17-58	John Shockley	1947	97		L $\frac{1}{2}$	Dm	Na	1,835	
17R1	4-17-58	I. Cardale			D	J $\frac{1}{2}$	Dm	Na	1,815	
18A1	4-18-58	P. D. Padgett	1955	155	C 10	S 3/4	Dm		1,870	107 L
19A1	4-18-58	J. E. Booth			8	N N	Un	Tc	1.3	1,910 W
20A1	4-18-58	Cora Shuey		52	8	L $\frac{1}{4}$	Dm	TcW	1.6	1,815 C,W
20A2	5- 1-52	Irvin Enger		100	C 6	J $\frac{1}{2}$	Dm	TcN	2.1	1,815 b44.45
20J1	4-18-58	Lloyd Burnsteter				J 1 $\frac{1}{2}$	Dm	Na	1,875	88
20R1	4-18-58	Frank Bagley				N N	Un	Na	2,008.8	232 C
21C1	4-18-58	O. J. Cones	1933	42	C 12	J $\frac{1}{2}$	Dm		1,800	
21C2	4-18-58	do.		36	D 36	N N	Un		1,800	
21D1	4-18-58	T. L. Martin	1934	60	8	J E	Dm		1,810	
21D2	4-18-58	R. A. Elleboudt		60	8	J 1	Dm	Tc	2.0	1,805 36.04
	5- 1-52									34.94

b. Pumping.

d. Measurement by San Bernardino County Flood Control District.

k. Nearby well being pumped.

USGS number	Date of observa- tion	Owner or user	Well data				Measuring point	Altitude of lsd (feet)	Water	
			Year com- pleted	Depth (feet)	Type, diam- eter (in.)	Pump type and power			Depth below lsd (feet)	Other data

T. 1 N., R. 9 E.--Continued

1N/9-21D3	4-18-58	W. R. Lydeard			12 J $\frac{1}{2}$	Dm		1,800		
21E1	4-18-58	H. Smith	1940	88	C 12 L G	Dm	HccS	1.0	1,840	42.61 W
21E2	4-18-58	do.	1940	100	C 6 J $\frac{1}{2}$	Dm	Na		1,845	W
21E3	4-18-58				L	Un	Na		1,825	
21J1	4-23-58 5-7-52 4-10-46	Lloyd Greenman		200	D 48 J 1	Dm	Na Tbc	2.0	1,845	64.04 d63.49 C
21R1	4-23-58	Twentynine Palms High School	1937	185	C 12 T 10	I	Na		1,850	
22B1	4-23-58	James Cagney	1929	309	C 8 L 2 $\frac{1}{2}$	Dm			1,810	270 C,W
22C1	4-23-58	G. V. Michels		50	12 J 1 $\frac{1}{3}$	Dm	Tc	1.1	1,814.1	44.35 W
22C2	4-23-58			59.7	8 L N	Un	Tc	.55	1,805.2	35.46 W
22C3	4-23-58	E. Michels		60	D 48 J 1 $\frac{1}{2}$	Dm	Na		1,815	C
22C4	4-23-58				D	Ds			1,805.9	W

22D1	4-24-58 4-10-46 4-1-40 2-17-40	R. Michels	D 36	L W	Dm	TcW	O	1,815.4	44.36 442.30 441.20 441.05
22D2	4-23-58	Rico Watrus	J 1½	Un	Hcc	1.0	1,810	42.49	W
22D3	4-23-58		1951	J ½	Dm	Na	1,810		
22D4	4-24-58	Rico Watrus	R 8	S 1	Dm	Tc	.5	1,810	40.88 L
22D5	4-24-58	Robert Michels	8	J ½	Dm	Na		1,805	C
22D6	4-23-58		23.5	D 36	N W	Ds		1,805	Dry
22D7	4-23-58			D 72	N N	Ds		1,805	
22E1	4-23-58	W. B. Hatch	1933	87	C 12	L W	Dm	Bcl .6	1,827.0 b55.80 C,W
22E2	4-23-58	George Michels, Jr.		64	D 40	S E	Dm		1,829.7
22E3	4-24-58 5-2-52	E. J. Walbert	1939	127	Cd 12	J 3/4	Dm	Na	1,815.2 C
22E4	4-23-58	W. B. Hatch	1957	125	C 10	J ½	Dm	Tap 2.2	1,830 52.28
22E5	4-23-58	do.	1935	65	C 8	L	Un	Tc 1.0	1,830 52.69
22E6	7-24-58			69.9	8	N N	Un	Tc 0	1,820 50.10
22F1	4-23-58				8	N N	Un	Na	1,830
22F2	4-23-58				8	J ½	Dm		1,825

b. Pumping.

d. Measurement by San Bernardino County Flood Control District.

USGS number	Date of observa- tion	Owner or user	Well data					Measuring point	Altitude of lsd (feet)	Water level Depth below lsd (feet)	Other data
			Year com- pleted	Depth (feet)	Type, Pump		Use				
					diam- (feet)	eter: and (in.): power:					
T. 1 N., R. 9 E.--Continued											
1N/9-26E1	4-24-58	Bertha Loner		133.7	8	S E	Dm		1,897.4	116	W
26F1	4-24-58	Sanders	1920	144	4	N N	Un		1,920		
26G1	4-24-58	Paul Kunasz	1955	550	C 8	S 2	Dm	Na	1,975	415	C, L
26N1	4-24-58	Lawrence Jacobs	1934	162	C 8	N N	Un	Tc	1,933.7	157.40	W
26P1	4-24-58	Marion Radick	1955	500	8	S E	Dm		1,920		
27C1	4-25-58	A. Wrubel		145	12	N N	Un	Tc	1,868.0	83.65	C, W
27C2	4-24-58	do.	1934	350	12	T 7½	Dm	Hpb	1,862.5	79.06	L, W
27C3	4-24-58	do.		125	Cd 8	L W	Un		1,870		
27C4	4-25-58	do.		145.0	12	N N	Un	Tc	1,870	80.42	
27D1	4-23-58	Twentynine Palms Grammar School	1927	120		N N	Ds		1,865.9		W
27K1	4-24-58	T. J. Hopkins	1936	165	C 12	L ½	Dm		1,900	113	C, W
27M1	4-24-58	H. W. Mills		300	8	N N	Un	Hcc	1,900	114.98	W

28B1	4-25-58	Matherly	180.6	8	N N	Un	Na	1,948.7	W		
28D1	4-28-58	Stephens				Ds		2,008.0	W		
28H1	4-25-58	H. E. Ferguson				Dm		1,910			
28R1	4-25-58	Fett				Ds		1,920.6	W		
29F1	4-28-58	McCutcheon	1934	380	14	L N	Un	Tc .7	2,079.4	297	C,W
29R1	4-28-58	Shell Service Station		0		N N	Ds		1,991.1		C,W
30K1	4-29-58 12-3-52	Mrs. Nicolson	1936	171	C 8	N N	Un	Tc .5	2,120.4	139.04 139.44	C,L
30Q1	4-28-58	Mathias Laufer		143.5	8	N N	Un	Tc 3.4	2,091.6	102.84	C,W
30Q2	4-28-58	Woodrow Mathews		53	8	N N	Ds		2,100	Dry	W
30R1	4-29-58	Wesley Smith	1958		C 8	S E	Dm		2,095		
31A1	4- 3-58	Twentynine Palms County Water District	1953	350	R 12	T 40	Ps		2,095	98	C,L,W
31A2	4- 8-58	Robert Scriven	1950	117	C 8	L 1	Dm	Na	2,070	87	C
31A3	4- 4-58 12-4-52	Ruth Abel	1936	98.0 115	6	N N	Ds	Hpb 1.5	2,070	Dry 99.70	C
31C1	4- 3-58	Twentynine Palms County Water District	1937	306	C 14	T 25	Ps		2,102.3	111	C,L,W
32F1	4-29-58	Mrs. Griffin	1937		12	L N	Un	Hcc 0	2,060	69.71	C,W
32G1	4-29-58	Hilda Peterson	1933	68	8	J $\frac{1}{2}$	Dm	Hsc .73	2,020	46.04	W

USGS number	Date of observa- tion	Owner or user	Well data					Measuring point	Altitude of lsd (feet)	Water level	Other data
			Year com- pleted.	Depth (feet):	Type, diam- eter, and (in.):	Pump type and power:	Use				

T. 1 N., R. 9 E.--Continued

1N/9-32G2	4-29-58	Ira Drake	1940	72	C 6	L N	Un	Tc	0.6	2,040	62.86	
32G3	4-29-58 12-3-52	V. J. Macklin		75	C 8	L W	Dm	Hcc	.6	2,035	47.44 43.67	
32G4	4-29-58 11-26-52	C. F. Lekstrum	1938	81	C 6	L N	Un	Tc	.6	2,205	64.87 61.59	
32G5	5- 1-58	Tubbs		84	8	J $\frac{1}{2}$	Un			2,020		
32H1	4-29-58			18.0	6	N N	Ds			2,020	Dry	
32H2	4-30-58	N. S. Hughes		125	8	N N	Un	Tc	.45	1,995	101.75	C, W
32H3	4-29-58	Enid Ribel	1923	35	D 36	L	Ds			2,005.4	Dry	C, W
32H4	4-29-58 1917	do.	1899	0	D 60	N N	Ds			2,005	Dry 17	
32H5	4-29-58 12-3-52	H. G. Legg	1948	52	D 36	J $\frac{1}{2}$	Dm	Tc	0	2,020	40.18 31.42	
32J1	4-29-58 1917	Virginia Baling		0	D 36	N N	Ds			2,020	Dry 28	
32J2	4-29-58	Rogers			6	L 1	Dm	Na		2,020		

32X1	4-29-58	Frank Brockman	60	8	J $\frac{1}{2}$	2,045	
32L1	4-29-58 4-8-47 4-10-46	D. Williams	85.5	6	N N Ds	2,082.2	Dry a84.99 a84.54
32R1	4-29-58	H. L. Earenfight	1935	75	8 L W Dm	Tcl .9	2,045.7 b62.14 C,W
33F1	7-22-58 4-30-58 12-17-57 4-24-57	Robert Van Lahr	175	12	N N Un	Tap 1.0	1,985 .85 .43 d.31 d.24 C
33F2	4-30-58	do.	1939	285	12 T 10 Ps	Na	1,985 C,L
33F3	4-30-58	do.	65	8	N N Un	Tc 0	1,980 1.36 C
33J1	4-29-58	National Park Service	1900	16	D 30 L H Ps	Tc .5	1,961.4 2.52 C,W
34A1	4-30-58	Clara Hine		6	L W Dm	Tc 1.0	1,935 167.27 C,W
35F1	4-30-58	H. L. Watson	253	12	L W Dm	Hcc 1.0	1,971.0 115.30 C,L,W
35N1	4-3-58	Twentynine Palms County Water District	1935	244.2	C 12 T 15 Ps		2,079.5 108 C,L,W
<u>T. 2 N., R. 5 E.</u>							
2W/5-1A1	5-28-58	Walter Reche	1957		C 20 T G Un	Hpb 1.0	2,980 57.60
1C1	5-28-58	do.	107		C N N Ds		3,020 Dry
1H1	5-28-58	do.	1940	85	C 5 L W Dm	Na	2,980 60 C

b. Pumping.

d. Measurement by San Bernardino County Flood Control District.

USGS number	Date of observa- tion	Owner or user	Well data					Measuring		Altitude		Water	
			Year com- pleted	Depth :(feet):	Type, diam- eter, and :(in.):	Pump type and power	Use	point	of 1st (feet)	Depth below 1st (feet)	level	Other data	
T. 2 N., R. 5 E.--Continued													
2N/5- 1H2	5-28-58	Walter Reche	1950	115	C 8	N N	Un	Tc	0.8	2,985	65.44		
	9-11-53										64.78		
	2-25-53										64.87		
	10-25-52										64.91		
1K1	5-28-58	do.		116	C 20	N N	Un	Hcc	1.3	3,015	95.12		
	9-11-53										94.75		
2A1	5-28-58	James Gordon	1949	152	C	N N	Un	Na		3,080			
5Qs	5-23-58	Ruby Mountain Spring				N N	Un			3,880			
12G1	5-23-58	John Taylor	1957	150	C 6	S $\frac{1}{2}$	Dm	Na		3,075	126	L	
12P1	5-22-58	Hamton	1958	260.2	C 8		Un	Tc	1.3	3,160	253.39		
13A1	5-23-58	Flamingo Estates	1957	190	C 14	N N	Un	Tc	1.5	3,080	132.67	L	
23K1	5-21-58	do.	1957	465	C 12	N N	Un	Tc	1.2	3,300	228.96	L	
25J1	5-22-58	Mode O'Day	1957	700	R 8	L G	T	Tap	.7	3,375	363.02		
27H1	5-20-58	A. J. Bailey	1958	240	C 6	Sml	Dm	Tap	.4	3,460	153.78	L	
34A1	5-20-58	Rogers	1958	220	C 6	S $\frac{1}{2}$	Dm	Tc	.4	3,470	177.72	L	

34B1	5-20-58	J. B. Solomon	1957	230	C 6	N N	Un	Tc	.8	3,510	193.66	L
34R1	5-22-58	A. C. Clark		150	C	N N	Ds			3,550	Dry	
<u>T. 2 N., E. 6 E.</u>												
2W/6-3Z1	5-29-58	Tenth Avenue Baptist Church	1957	458	C 8	N N	Ds			2,860	Dry	L
5G1	5-29-58			42.0	D 48	L H	Ds			2,920	Dry	
6D1	5-28-58 9-11-53 2-25-53	G. Van Tassel	1921	54	C 8	L W	Dm	Tc	1.0	2,960	37.23 36.21 36.22	C
6D2	5-28-58	do.	1928	200	C 8	J $\frac{1}{2}$	Dm	Tc	1.0	2,960	b42.65	W
6D3	5-28-58	do.	1914			N N	Ds			2,955		
6D4	5-28-58	do.		150		N N	Ds			2,950	Dry	
7F1	5-22-58	V. E. Kolb	1958	200	C 6	N N	Un			3,080	180	
7Q1	5-22-58	N. J. Lenders	1954	252	C 10	T G	Dm	Hpb	.7	3,070	184	L
7R1	5-22-58	George Bellfield	1951	235	C	T $7\frac{1}{2}$	Dm	Na		3,080	165	C
8M1	6- 3-58	Gertrude Gale	1958	285	C N	N N	Ds			3,080	Dry	L
18A1	5-22-58	Marion Williams	1954	222	C 8	T G	Dm			3,100	194	L
18C1	5-22-58	J. M. Barter	1956	170	C 6	L $\frac{1}{2}$	Dm			3,120	135	L
18F1	5-22-58	DeShun		200	C 6	N N	Un	Na		3,130		

b. Pumping.

m. Reported to pump about 10 gpm.

USGS number	Date of observa- tion	Owner or user	Well Data			Measuring:			Water	
			Year :	Depth :	Type :	Pump :	point	Altitude:	level :	Other
			com- pleted:	(feet):	diam- eter:	type and :	(feet):	of lsd (feet):	Depth below lsd: (feet):	data

T. 2 N., R. 6 E.--Continued

2N/6-18J1	5-22-58	Joseph Becker	1946	267	C 6	L G	Dm	Tc 0	3,135	229.60	L
30L1	5-22-58	W. J. McFarland	1956	377	C 6	L W	Dm	Tap .2	3,325	311.45	L
2N/7-26B1	5-8-58	T. 2 N., R. 7 E. R. E. Kirschman	1957	575	C 10	L G	Dm		2,590	540	L
30M1	5-22-58			137.0	8	N N	Ds		2,870	Dry	
31D1	5-22-58		1958	685	R N	N N	Ds		2,875		
36R1	5-8-58 2-19-53	L. J. Rogers	1952	372	C12	L G	Un	Hcc .5	2,320	296.13 296.4	L

T. 2 N., R. 8 E.

2N/8-20A1	4-8-59	A. L. McGuire	1958	560	C 8	N N	Un	Tc 1.5	2,260	463.5	L
22H1	4-8-59	Eugene Holt	1958	390	C 8	S 1	Dm	Tap 1.0	2,120	328.13	L
24R1	7-23-58	E. G. Gudmunson	1958	175	C 8	SI $\frac{1}{2}$	Dm		1,870	115	
25N1	8-6-57	M. E. Melvin	1956	215	C10	J G	Dm	Tap 1.0	1,945	153.35	L
26J1	5-9-58	C. R. Cheney	1932	185	8	T G	Dm	Hpb 0	1,950	157.31	C,W

32R1	5-8-58	Green	414	C 8	L G	Dm	2,215	345	
<u>T. 2 N., R. 9 E.</u>									
2N/9-19N1	5-20-58	Strickler	78.0	8	L N	Un	1,834.0	69.25	C, W
19N2	5-20-58	Strickler	61.0	4	N N	Ds	1,824.0	Dry	W
19N3	5-16-58 4-27-52	H. A. Porter	136	8	L W	Dm	1,855	92.73 86.15	C L
29N1	5-20-58	Hinshaw	8.5	8	N N	Ds	1,750	Dry	W
30A1	5-20-58		3.0		N N	Ds	1,760	Dry	
30A2	5-16-58	Donald Fisher	40	D 8	L H	Dm	1,770	Flowing	W
30B1	5-20-58	Nichols	17.0	D60	N N	Ds	1,785	Dry	C
30D1	5-20-58 4-27-52		47.0	8	L N	Ds	1,820	Dry 45.54	
30H1	5-16-58 4-26-52		7.9	10	N N	Un	1,760	Flowing Flowing	
30N1	5-16-58	Elma Camp	36.5	D 7	N N	Un	1,810	35.48	
30P1	5-16-58	Elma Camp	75		L W	Dm	1,805	35	
30P2	5-16-58	Emery Ball	1936	D 8	N N	Un	1,790	27.76	W
30Q1	5-16-58	C. T. Parker	1957	C10	J $\frac{1}{2}$	Dm	1,765	13.94	L

USGS number	Date of observa- tion	Owner or user	Well Data				Measuring:			
			Year	Type	Pump	point	Altitude	level	Water	
			com- pleted:	Depth (feet):	diam- eter:	type and:	Use (feet):	of lsd (feet):	Depth below lsd (feet):	Other data

T. 2 N., R. 9 E.--Continued

2N/9-30Q2	5-16-58 4-29-52	J. S. Pryer R. E. Jones	1950	35	C 6	L $\frac{1}{2}$	Dm	Na Tc 0.5	1,770	16.87
31C1	5-16-58	L. R. Christopher			10	N N	Un	Tc 1.0	1,782.8	16.15 W
31C2	5-16-58	Myer			6	L W	Dm	Na	1,790	18
31E1	5-16-58	L. R. Christopher	1938	68	C 8	L3/4	Dm	Na	1,830.0	W
31J1	5-20-58	Mesquite Spring			D24	N N	Un	Ls 0	1,765	3.8 W
31J2	5-21-58	Osburn		30	12	N N	Dm		1,770	Flowing
31N1	5-16-58	Johnson		56.1			Ds		1,836.9	Dry C W
31Q1	5-20-58 4-29-52	Jesse Meggs	1952	31	C 8	L W	Dm	Tc 0.4	1,795	15.25
31R1	5-20-58	H. C. Brown		26.0	8	L W	Un	Tc 0.6	1,765.1	16.45 W
31R2	5-20-58	H. C. Brown			8	J3/4	Dm		1,775	Flowing

Continued

31R3	5-20-58	R. S. Stewart	8	J $\frac{1}{2}$	Dm	Hsc	0.1	1,770	Flowing
31R4	5-20-58	John Haymes	8	J E	Dm	Tc	1.7	1,775	4.15
31R5	5-21-58	Reed	D 4	N N	Dm			1,780	Flowing
32E1	5-21-58 8-6-52 4-29-52		13.8 12	N N	Un	Tc	2.4	1,760	7.82 6.23 6.72
32N1	5-21-58		0	N N	Ds			1,760	W
32R6	4-4-58		1933		Ds			1,760	Dry
<u>T. 3 N., R. 5 E.</u>									
3N/5- 2B1	5-27-58	Lassiter	1890 69.0 D60	N N	Ds			2,491	Dry
<u>T. 3 N., R. 6 E.</u>									
3N/6-19J1	5-27-58	G. Van Tassel	1948 100 R 8	N N	Ds			2,815	Dry
20N1	5-27-58	G. Van Tassel	1948 276 R 8	N N	Ds			2,805	
31N1	6-3-58		5.0 D48	N N	Ds			2,950	Dry
<u>T. 4 N., R. 5 E.</u>									
4N/5-13R1	5-22-58 11-1-53	Emerson Lake Mill site	55.0 D48	N N	Un	Tc	1.0	2,298	39.99 40.10 C
36K1	5-14-58		83.0 D48	N N	Ds			2,480	Dry

USGS number	Date of observa- tion	Owner or user	Well Data				Measuring:		Water	
			Year :	Type, : diam- : Depth : (feet):	Pump : type : eter : (in.):	Use : and : power:	point	Altitude: of 1st (feet)	Depth below 1st: (feet)	Other data

T. L. S., R. 5 E.

1S/5- 2A1	6-3-58	Clayton Hoyt	1947	280	L 5	Dm	Hcc	1.65	3,285	185.19	W
2B1	7-14-58	Charles Butterbaugh	1946	240	L N	Un			3,240		W
2C1	5-14-58	J. F. Davenport	1946	252	L W	Dm			3,310		W
2C2	5-14-58	Albert Vogel	1947	250	R 7	Dm	Tc	0.5	3,305	199.0	W
2C3	5-14-58	Martin Fuller	1931	235	C 8	Un	Tc	0	3,300	197.25	C
2F1	5-15-58	Floyd Peters	1938	300	C 6	Dm	Hcc	0	3,380	282.52	
2F2	5-14-58	Keck			J E	Dm			3,360		
3B1	2-25-58	Yucca Valley Water Co.		400	S40	Ps	Hcc	1.0	3,325	225.85	C W
3Ms	5-14-58				Spring				3,510	Dry	
4J1	5-8-58 11-17-48 4-5-48 11-13-47 4-15-47	Cobden		100		Dm			3,460	a35.60 a34.40 a34.31 a33.82	
4J2	5-9-58					Dm			3,400		

4K1	5-9-58	Kilburn Bros.	1955	80	C10	L H	Dm	Tc	0	3,440	49.11
4L1	5-9-58	R. E. Robinson	1947	165	C 8	L $\frac{1}{2}$	Dm	Tc	0.7	3,480	53.74
4P1	5-7-58	John Stephenson	1951	250	C10	L W	Dm			3,600	
4P2	5-7-58	R. L. Stephenson	1945	160	C10	N N	Ds			3,600	
4P3	5-7-58	S. Webb	1947	225	C 8	L W	Dm			3,600	
4P4	5-7-58	Erna Jackson	1947	150	C12	S 1	Dm	Tc	0	3,580	101.80
4Q1	5-7-58	Leonard Hammett				L $\frac{1}{4}$	Dm	Na		3,560	
4Q2	5-7-58	W. C. Brown		125	10	J $\frac{1}{2}$	Dm	Tc	.5	3,560	97.45
4Q3	5-7-58	Whitehead				L 1	Dm			3,540	
4Q4	5-8-58	T. M. O'Dale	1955	180	C 8	L W	Dm	Na		3,580	
4Q5	5-8-58	Jack O'Connor	1950	129	C 6	L3/4	Dm	Na		3,560	42
4Q6	5-8-58	Mrs. Denyle		72		L $\frac{1}{2}$	Dm			3,510	
4Q7	5-8-58	Glenn Hammett		178	C 8	J $\frac{1}{2}$	Dm	Na		3,510	
4R1	5-8-58	Grant Redden		156	C12	L W	Dm			3,515	
4R2	5-8-58	F. Batters		100		N N	Un	Tc	1.0	3,520	53.35
4R3	5-8-58	W. M. Rice		108	10	N N	Un	Na		3,500	

d. Measurement by San Bernardino County Flood Control District.

USGS number	Date of observa- tion	Owner or user	Well Data					Measuring:			Water			
			Year	Depth :(feet):	Type, Pump : diam-: type : eter: and :	Use	point	Altitude: :(feet):	Depth :(feet):	level				
											com- pleted:	N	E	Dm
T. 1 S., R. 5 E.--Continued										L	C L			
1S/5-4R4	5-8-58	Dan Atoll		59.0	6	N N	Un	Tc	0.4			3,520	58.00	
4R5	5-8-58	Fred Laferney	1957	221	C 6	S E	Dm			3,520	52		L	
4R6	5-8-58	Fred Laferney	1957	138	10	L W	Dm			3,535				
4R7	5-8-58	W. M. Rice	1948	212	C 6	L3/4	Dm	Tc	1.1	3,520	80.51			
5A1	5-9-58	Robert Jernberg	1957	390	C12	L G	Un	Tc	1.0	3,550	144.76		C L	
8U1	5-7-58			8.0	D36	N N	Ds			3,360	Dry			
8Rs	5-7-58	Tunnel Spring			Spring N(n)	S				3,540	Flowing			
9A1	5-8-58	William Williams		185	C12	L W	Dm			3,590	90			
9A2	5-8-58	DeSpain		175	C10	S3/4	Dm	Hcc	.75	3,590	66.58			
9A3	5-8-58	P. M. Griswald	1950	235	C 8	S3/4	Dm	Hcc	.7	3,595	135.01			
9Z1	5-8-58	W. L. Mann	1955	137	C N	L W	Dm	Nz		3,640	87		L	
9B2	5-8-58		1957	140	C	J 1/2	Dm			3,580				

9B3	5-8-58	William Pace	C	S E	Dm	Na	3,600	
9C1	4-8-58			L N		Na	3,515	
9F1	5-7-58	W. M. Greathouse	10	S $\frac{1}{2}$	Dm		3,700	70
9J1	5-7-58	Glenn Annabelle	1957 180	S 1	Dm	Tc	1.5	3,800 87.65 L
9K1	5-7-58	H. C. Dohrmann	1955 231	S 1	Dm	Hcc	1.0	3,875 bl44.16
9K2	5-7-58	Frank Newman	140	J E	Dm			3,800
9K3	5-7-58	G. A. Harris	1952 200	J 1	Dm	Tc	.4	3,780 b96.58
9K4	5-7-58	Claude Baker	1949 160	L E	Dm			3,805 107
10C1	5-12-58		12	L W	Un	Hcc	.6	3,600 98.20
10C2	5-13-58	Plath	8	L W	Dm	Hcc	0	3,545 83.84
10C3	5-12-58	George Squires	65	L W	Un	Hcc	-1.3	3,530 56.82
10C4	5-14-58	Irene Coad	75	L W	Dm	Na		3,580
10D1	5-13-58	Mrs. Bahr	1954 130	L W	Dm	Tc	.9	3,555 76.04
10D2	5-14-58		6	L N	Un			3,540
10D3	5-14-58	Art Over	75	L W	Dm	Na		3,600

T. 1 S., R. 6 E.

1S/6-1Gs 5-21-58 Coyote Hole

Spring

2,660 Dry

b. Pumping.

n. Flows about $\frac{1}{2}$ gpm.

USGS number	Date of observa- tion	Owner or user	Well Data					Measuring		Water	
			Year	Type,	Depth	Pump	point	Altitude	level	Depth	Other
			com- pleted	diam- eter	(feet)	type and	Use	of 1st (feet)	below 1st (feet)		data
				(in.)		power					

T. 1 S., R. 6 E.--Continued

1S/6-2M1	6-3-58	Skyline Highlands Estate	1958	p810	R12		Ds	3,345			
4M1	5-15-58	B. M. Leslie	1956	236.5	R 6	N N	Ds	3,500		Dry	
4L1	5-15-58	B. M. Leslie		90	R 6	N N	Ds	3,500		Dry	
8J1	5-15-58	DeLage		222.5	12	N N	Ds	3,750		Dry	
18J1	5-15-58	Mrs. Cole		44.5	N	N N	Ds	3,920		Dry	
18J2	5-15-58	Mrs. Cole		33.5	6	N N	Ds	3,920		Dry	
18J3	5-15-58	Mrs. Cole		q500	R 6	N N	Ds	3,920			
18J4	5-15-58	Mrs. Cole		5.0	R	N N	Ds	3,920		Dry	
18M1	5-15-58	Mrs. Cole		40.0	R	N N	Ds	3,985		Dry	
23L1	5-21-58	Glenn Bailey		6.0	D40	N N	Ds	4,560		Dry	
23Q1	5-15-58				R	N N	Ds	4,490			
30Gs	5-6-58	Black Rock Spring			Spring	N N		4,360		Dry	

T. 1 S., R. 7 E.

1S/7-27R1	5-2-58	National Park Service	183.5	5	N N	Un	Tc	2.35	3,770	82.59
33Ls	5-2-58	Thalman		Spring N(n)	S				3,800	Flowing
34El	5-2-58	Dr. Cooper	100		N N	Ds			3,745	Dry
34Fl	5-2-58	National Park Service	112	C 8	L W	Un	Tc	1.15	3,745	b99.96 C
35Pl	5-2-58	W. W. Whitlow	4.5	D72	N N	Ds			3,940	Dry

T. 1 S., R. 8 E.

1S/8-12Ds	5-2-58	Fortynine Palms Oasis		Spring		Un			2,800	Flowing
33	17Cs	Sneakeye Spring		Spring					3,500	Dry
	21Ls	Willow Hale		Spring		Un			4,000	Flowing
	31J1	W. W. Whitlow	200	5	N N	Ds			4,065	Dry
	31J2	W. W. Whitlow	40	D60	N N	Ds			4,065	Dry
	32C1	W. F. Keys	1887	D72	L W	Dm	Hsc	0	4,140	16.95
	32C2	W. F. Keys	1923	D36	N N	Un	Hcc	0	4,110	17.82
	32C3	W. F. Keys	1943	D72	N N	Un	Ls	0	4,110	23.81
34Pl	5-1-58	W. F. Keys	40	D72	B H	Un	Tbc	3.0	4,320	22.90

p. Well reported to be originally 810 feet deep, encountered bedrock at 30 feet, no water encountered.

q. Well reported to be originally 500 feet deep, no water encountered.

n. Flows about $\frac{1}{2}$ gpm.

b. Pumping.

USCS number	Date of observa- tion	Owner or user	Well Data					Measuring		Water	
			Year	Depth (feet)	Type, diam- eter (in.)	Pump: type and power	Use	point	Altitude: of lsd (feet)	Depth below lsd: (feet)	Other data

T. 1 S., R. 9 E.

1S/9-2B1	4-30-58	O. J. Booth	1937	108	D	L W			2,060		W
3D1	4-3-58	Twentynine Palms County Water Dist.	1937	300	C12	T15	Ps		2,076.6		C W
5A1	4-30-58	Goodale			D60	J 1			2,063.4		C W
32Gs	5-2-58	Pine Spring			Spring				4,200	Dry	

T. 2 S., R. 7 E.

2S/7-6R1	5-21-58	National Park Service		24.5	D 48	N N	Ds		4,410	Dry	
7Bs	5-21-58	Covington Spring			Spring				4,500	Dry	

T. 2 S., R. 8 E.

2S/8-3C1	5-1-58	Mrs. Olson	1928	108	D72	L N	Un	Na	4,500		
5E1	5-1-58	W. W. Whitlow	1948	80	C 8	L 1 1/2	Dn	Tc O	4,200	34.75	
6N1	5-1-58	National Park Service		125	6	L W	Dn		4,130	70	
7K1	5-1-58	National Park Service		290	C 8	N N	Un	Na	4,100	220	

8J1	5-1-58	National Park Service	350		N N	Un		4,200	340
8M1	5-1-58	National Park Service	7.7	D36	L H	Un	Ls 0	4,160	6.0
12L1	5-6-58	National Park Service	2.0	D60	N N	Ds		4,390	Dry
12D1	5-2-58	National Park Service	5.0	D42	L H	Ds		4,235	Dry
<u>T. 2 S., R. 9 E.</u>									
28/9-3Q1	5-1-58	National Park Service 1950	r209	C N	N N	Ds		3,675	L
11D1	5-1-58	National Park Service 1950	s51	C N	N N	Ds		3,675	L

r. Reportedly drilled to 209 feet, no water encountered.

s. Reportedly drilled to 51 feet, no water encountered.

Table 2.--Cross Index of U. S. Geological Survey numbers and
San Bernardino County Flood Control District numbers

The first column lists the numbers assigned to wells by the Geological Survey, and the second column lists numbers assigned to the same well by the County agency. The wells for which the Geological Survey and County numbers are the same are not listed.

USGS number	County number	:	USGS number	County number
1N/5-34F1	1N/5E-34-2a	:	1N/7-33C1	1N/7E-33-2a
34F1	34-4	:	1N/8- 1D1	1N/8E- 1-2
35N1	35-3	:	9L1	9-3
36H1	36-1	:	12C1	12-1a
36H1	Warren's well ^{1/}	:	21F1	21C1
1N/6-25M1	1N/6E-25-3	:	26G1	26-1a
28K1	28-4a	:	31A1	32D1
28L1	28-3	:	36A1	36-1a
28L1	28M1	:	1N/9- 4N1	1N/9E- 4-3a
29L1	29F1	:	4N2	4-3b
31P1	31-3a	:	5Z1	5-4c
1N/7-21Q1	1N/7E-21-4b	:	6J1	6-4a
23P1	23-3a	:	7E1	7-2a
26P1	26-4a	:	7G1	7-1b
28R1	28-4b	:	7H1	7-1a
28R2	28-4a	:	8D1	8-2b
28R2	Coyote well ^{1/}	:	8J2	8-2c

1. From Thompson (1929).

USGS number	County number	:	USGS number	County number
1N/9- 8F1	1N/9E- 8-2a	:	1N/9-27C1	1N/9E-27-2b
8J1	8-4a	:	27D1	27-2c
9F1	9-2a	:	27K1	27L1
9M1	9-3a	:	28B1	28-1a
9M2	9E2	:	28D1	28-2a
9Q2	9-4a	:	28R1	28-4a
10D1	10-2a	:	29F1	29-2a
14D1	14E1	:	29F1	29B1
14D2	14-2b	:	29R1	29-4a
14L1	14-3a	:	30K1	30-4b
17E1	17F1	:	30Q1	30-4a
17J5	17-4a	:	31C1	31-2a
20R1	20-4a	:	32H2	32H1
21J1	21-4a	:	32H3	32-1b
22C2	22-2h	:	32H3	Sullivan well ^{1/}
22C4	22-2g	:	32H4	Sullivan well ^{1/}
22D1	22-2c	:	32L1	32-2a
22D2	22D1	:	32R1	32-4d
22E1	22-2a	:	32R1	32J1
22E1	22M1	:	33F1	33L3
22E2	22-2f	:	33F2	33L2
26E1	26F1	:	33J1	33-1a
26N1	26-3a	:	33J1	Twentynine Palms Spring 1/

1. From Thompson (1929).

USGS number	County number	:	USGS number	County number
1N/9-34A1	1N/9E-34-1a	:	2N/9-31C2	2N/9E-31-2a
35F1	35-2a	:	31N1	31-3a
35N1	35-3a	:	1S/5- 2A1	1S/5E- 2-1a
2N/8-26J1	2N/8E-26A1	:	3B1	3F1
2N/9-19N1	2N/9E-19-3a	:	4J1	4-4b
19N1	19N2	:	4R2	4-4a
19N2	19N1	:	1S/9- 3D1	1S/9E- 3-2a
29N1	32-2a	:	5A1	5-1a
30A2	30A1	:		

Table 3.--Records of water levels in wells

Table 3 includes all known records of water-level measurements in wells in the area which are in addition to the measurements given in table 1. The number in parentheses following the Geological Survey number is the number assigned to the well by the San Bernardino County Flood Control District.

Altitudes given are in feet above mean sea level for the land-surface datum at the well. Land-surface datum is a plane of reference which approximates land surface. Altitudes given in whole feet are interpolated from topographic maps. Altitudes given in feet and tenths were determined by spirit leveling by W. B. Hatch, licensed land surveyor, Twentynine Palms, Calif., except as otherwise indicated.

Measurements. Water-level measurements were made by the U. S. Geological Survey; by the San Bernardino County Flood Control District; by the California Electric Co.; and by W. O. Wagner, consulting hydraulic engineer. All water-level measurements given are depths to water below or above (+) land-surface datum. That is, the altitudes of the measuring points as reported above or below land-surface datum have been subtracted from or added to the water-level measurements. If more than one measuring point has been used they were field checked and related to each other. Thus, all measurements given are referred to a common datum. The latest measuring points used by the Geological Survey are given in table 1.

The measurements are by the San Bernardino County Flood Control District, except as otherwise noted.

1N/5-34K1. Yucca Valley Water Co. Depth about 378 feet. Altitude about 3,375 feet.

Date	Water level	Date	Water level	Date	Water level
Apr. 14, 1947	242.11	Apr. 14, 1950	249.80	Feb. 25, 1958	a300.85
Nov. 13	248.39	Mar. 12, 1959	257.35		
Apr. 27, 1949	247.81	May 26, 1952	256.68		

1N/5-34P1. Old Yucca Valley School. Altitude 3,340.4 feet.

May 28, 1941	206.47	Apr. 14, 1947	205.96	Nov. 16, 1948	capped
Apr. 15, 1946	204.27	Nov. 13	206.92		
Nov. 16	205.34	Apr. 5, 1948	207.74		

a. Measurement by Geological Survey.

1N/5-34R1 (1N/5E-34-4). E. C. Hardesty, formerly Dennis Lilley.
Depth about 265 ft. Altitude 3,305.1 ft.

Date	Water level	Date	Water level	Date	Water level
May 28, 1941	170.62	Apr. 27, 1949	174.24	Nov. 23, 1953	170.40
Apr. 15, 1946	168.32	Nov. 15	175.31	Apr. 20, 1954	177.50
Nov. 16	169.42	Apr. 10, 1950	175.83	Dec. 13	165.60
Apr. 14, 1947	169.40	Mar. 12, 1951	182.94	Apr. 19, 1955	164.90
Nov. 13	171.45	Nov. 12	176.65	Feb. 14, 1958	obstruction at 132 ft. (a)
Apr. 5, 1948	172.31	Apr. 14, 1952	179.07		
Nov. 16	173.45	May 22, 1953	161.00		

1N/5-35N1 (1N/5E-35-3). T. J. Scarvan. Altitude 3,296.6 ft.

May 28, 1941	162.70	Nov. 6, 1950	168.46	Apr. 19, 1955	174.48
Apr. 15, 1946	160.60	Mar. 12, 1951	169.33	Dec. 19	175.55
Apr. 14, 1947	162.05	Nov. 12	173.72	Apr. 24, 1956	176.10
Nov. 13	163.20	Apr. 14, 1952	170.69	Jan. 16, 1957	182.73
Apr. 5, 1948	163.81	Nov. 18	171.38	Apr. 23	178.35
Apr. 27, 1949	166.13	May 22, 1953	171.88	Feb. 14, 1958	a180.24
Nov. 15	166.76	Nov. 23	169.08	Jul. 21, 1958	a181.55
Apr. 10, 1950	167.45	Dec. 13, 1954	185.08		

1N/5-36H1 (1N/5E-36-1). J. A. Bendall, formerly Warren's well. Depth about 160 ft. Altitude 3,210.5 ft.

Dec. ?, 1917	a130	Nov. 6, 1950	108.02	Apr. 19, 1955	112.97
May 28, 1941	106.97	Mar. 13, 1951	108.34	Dec. 19	113.47
Apr. 15, 1946	105.20	Nov. 13	109.06	Apr. 24, 1956	116.65
Nov. 16	105.49	Apr. 14, 1952	109.45	Jan. 16, 1957	114.69
Apr. 14, 1947	105.85	Nov. 18	110.24	Apr. 23	113.92
Nov. 13	109.54	May 22, 1953	110.57	Feb. 20, 1958	a116.06
Apr. 5, 1948	106.41	Nov. 23	119.92	July 21	a119.62
Nov. 15, 1949	107.45	Apr. 20, 1954	120.07		
Apr. 10, 1950	107.49	Dec. 13	118.87		

1N/5-36K1. Joshua Forest Water Co., formerly Whispering Well Ranch.
Depth about 333 ft. Altitude about 3,230 ft.

Nov. 13, 1947	113.72	Apr. 29, 1955	122.55	Apr. 23, 1957	125.34
Mar. 12, 1951	117.35	Jan. 16, 1957	125.08	Feb. 20, 1958	a127.51

a. Measurement by Geological Survey.

1N/6-4Q1. J. W. Boldman. Depth, about 726 ft. Altitude about 3,190 ft.

Date	Water level	Date	Water level	Date	Water level
Nov. 6, 1950	483.17	May 25, 1953	472.79	Apr. 23, 1957	460.40
Mar. 13, 1951	485.40	Apr. 19, 1955	461.90	Feb. 21, 1958	a457.33
May 26, 1952	480.40	Dec. 19	471.50	July 21	a457.42
Nov. 24	474.50	Feb. 6, 1956	c461.50		
Feb. 13, 1953	ab501.10	Jan. 16, 1957	464.25		

1N/6-9Q1. Mogle Brothers, formerly Yucca Mesa Estates Corp. Depth 529.3 ft. Altitude about 3,220 ft.

Nov. 16, 1947	474.52	Nov. 23, 1953	394.52	Apr. 24, 1956	396.84
Apr. 26, 1949	413.93	Apr. 20, 1954	394.22	Jan. 16, 1957	397.57
Apr. 11, 1950	426.59	Dec. 13	396.12	Apr. 23	397.80
Nov. 6	425.22	Apr. 19, 1955	395.37	Feb. 20, 1958	a398.32
Feb. 13, 1953	a391.32	Dec. 19	408.52	July 21	a398.33

1N/6-9Q2. Mogle Brothers, formerly Yucca Mesa Estates Corp. Depth 414.5 ft. Altitude about 3,220 ft.

Nov. 16, 1948	248.50	Nov. 23, 1953	255.30	Jan. 16, 1957	262.00
Apr. 26, 1949	266.06	Apr. 20, 1954	266.00	Apr. 23	261.86
Nov. 16	264.75	Dec. 13	262.20	Feb. 21, 1958	a261.47
Apr. 11, 1950	264.94	Apr. 19, 1955	265.35	July 21	a268.94
Mar. 13, 1951	263.65	Dec. 19	262.20		
Nov. 13	263.74	Apr. 24, 1956	262.60		

1N/6-10F1. R. K. R. Reiterer, formerly Olwell. Depth about 385 ft. Altitude about 3,100 ft.

Apr. 16, 1947	245.6	Nov. 6, 1950	249.3	Apr. 20, 1954	b266.9
Nov. 13	244.4	Mar. 13, 1951	256.0	Dec. 13	251.8
Apr. 5, 1948	240.5	Nov. 13	237.6	Apr. 19, 1955	230.5
Nov. 16	241.6	Nov. 24, 1952	239.9	Dec. 19	243.2
Apr. 26, 1949	243.7	Feb. 13, 1953	a237.7	Jan. 16, 1957	240.0
Nov. 16	248.2	May 25	244.0	Apr. 23	240.29
Apr. 11, 1950	240.7	Nov. 23	242.1	Feb. 21, 1958	a243.06

- a. Measurement by Geological Survey.
- b. Pumping.
- c. Measurement by owner.

1N/6-25M1 (1N/6E-25-3). Joshua Tree Service Co., formerly Ayers.
Depth about 512 ft. Altitude 2,714.4 ft.

Date	Water level	Date	Water level	Date	Water level
May 28, 1941	408	Apr. 11, 1950	408.08	Nov. 18, 1952	407.50
Apr. 15, 1947	406.00	Nov. 7	407.94	May 25, 1953	411.5
Nov. 17	408.32	Mar. 13, 1951	408.53	Apr. 1, 1956	406.5
Apr. 7, 1948	412.08	Nov. 13	414.18		
Nov. 16	408.25	May 26, 1952	418.00		

1N/6-28L1 (1N/6E-28M, 1N/6E-28-3). Mentalphysics, formerly Collins. Altitude 2,970.0 ft.

May 28, 1941	213.93	Nov. 16, 1948	212.05	Feb. 19, 1953	a209.44
Apr. 15, 1946	212.73	Nov. 16, 1949	210.87	Jan. 16, 1957	212.30
Nov. 16	212.15	Apr. 11, 1950	210.38	Apr. 23	211.74
Apr. 16, 1947	211.85	Mar. 13, 1951	223.2	Feb. 26, 1958	a211.43
Nov. 17	212.97	Nov. 13	212.38	July 22	a212.36
Apr. 5, 1948	210.03	Nov. 17, 1952	211.10		

1N/6-29L1 (1N/6E-29F1). Rancho Ramon Water Co. Depth about 690 ft.
Altitude about 3,160 ft.

May 22, 1953	157.3	Apr. 20, 1954	164.90	Dec. 19, 1955	154.70
Nov. 23	151.05	Dec. 13	158.90	Jan. 16, 1957	166.33
		Apr. 19, 1955	150.15	Apr. 24	170.79
				Feb. 26, 1958	a178.13

1N/6-31F1 (1N/6E-31-3a). Ralph Fowler. Depth about 325 ft.
Altitude about 3,280 ft.

Apr. 29, 1949	290.37	May 27, 1952	290.40	Apr. 19, 1955	291.20
Nov. 15	291.00	Nov. 18	294.00	Apr. 24, 1956	291.67
Apr. 11, 1950	290.70	May 22, 1953	291.30	Jan. 16, 1957	292.40
Nov. 6	290.59	Nov. 23	290.75	Apr. 23	292.40
Mar. 13, 1951	290.31	Apr. 20, 1954	289.00	Feb. 27, 1958	a292.20
Nov. 13	290.14	Dec. 13	292.70	July 22	a292.35

a. Measurement by Geological Survey.

1N/7-14N1. U. S. Navy. Depth about 450 ft. Altitude about 2,359 ft.

Date	Water level	Date	Water level	Date	Water level
Nov. 15, 1946	184.02	Apr. 11, 1950	184.30	Apr. 20, 1955	184.30
Apr. 16, 1947	184.00	Nov. 7	184.14	Dec. 20	184.30
Nov. 17	184.08	Mar. 13, 1951	184.69	Apr. 25, 1956	184.35
Apr. 7, 1948	184.30	Nov. 13	191.33	Jan. 16, 1957	184.48
Nov. 16	184.12	Feb. 13, 1952	a185.15	Apr. 24	184.44
Apr. 25, 1949	184.12	Dec. 16	a185.02	June 3, 1958	a184.44
Nov. 16	184.33	Dec. 14, 1953	184.30	July 22	a184.40

1N/7-21J1. Crawford, formerly H. W. Putnam. Depth about 274 ft. Altitude about 2,440 ft.

Apr. 17, 1946	259.73	Mar. 13, 1951	259.77	Apr. 20, 1955	266.60
Apr. 16, 1947	260.02	Nov. 13	260.14	Dec. 19	263.30
Nov. 17	260.48	May 27, 1952	259.20	Apr. 25, 1956	258.70
Apr. 7, 1948	260.04	Nov. 18	260.45	Jan. 16, 1957	261.75
Nov. 16	260.34	May 25, 1953	260.20	Apr. 24	259.89
Nov. 16, 1949	261.63	Nov. 24	259.50	Mar. 27, 1958	a268.40
Apr. 11, 1950	260.29	Apr. 20, 1954	264.20	July 22	a260.52
Nov. 7	259.92	Dec. 14	258.60		

1N/7-22E1. L. V. Peterman, formerly Sun Valley Acres No. 1. Altitude about 2,425 ft.

Nov. 15, 1946	247.88	Apr. 11, 1950	252.52	Apr. 20, 1955	253.50
Apr. 16, 1947	246.32	Nov. 7	255.04	Dec. 20	251.40
Nov. 17	247.65	Nov. 18, 1952	258.05	Apr. 25, 1956	253.05
Apr. 7, 1948	247.45	May 25, 1953	254.50	Jan. 16, 1957	245.35
Nov. 16	247.00	Nov. 24	260.6	Apr. 23	249.77
Apr. 25, 1949	250.00	Apr. 20, 1954	258.50	Mar. 27, 1958	a259.08
Nov. 16	251.81	Dec. 14	258.60	July 22	a264.25

1N/7-26E1. L. V. Evans. Depth about 250 ft. Altitude about 2,385 ft.

Nov. 15, 1946	210.74	Nov. 7, 1950	210.93	Apr. 21, 1954	210.83
Apr. 16, 1947	210.40	Mar. 13, 1951	210.79	Apr. 20, 1955	217.98
Nov. 17	211.05	Nov. 13	210.80	Dec. 20	213.53
Apr. 7, 1948	210.37	May 27, 1952	210.90	Apr. 25, 1956	210.93
Nov. 16	210.83	Nov. 18	212.18	Jan. 16, 1957	209.98
Apr. 25, 1949	220.44	Dec. 16	a210.62	Apr. 24	211.43
Nov. 16	212.19	May 25, 1953	211.03	July 22, 1958	a211.10
Apr. 11, 1950	211.01	Nov. 24	211.13		

a. Measurement by Geological Survey.

1N/7-26M1. Clyde Rollard, formerly Dougherty. Depth about 208 ft. Altitude about 2,475 ft.

Date	Water level	Date	Water level	Date	Water level
Nov. 15, 1946	169.17	Nov. 7, 1950	168.84	Dec. 14, 1954	169.10
Apr. 16, 1947	169.00	Mar. 13, 1951	168.49	Apr. 20, 1955	168.00
Nov. 17	169.00	Nov. 13	175.12	Apr. 25, 1956	168.10
Apr. 7, 1948	168.75	Apr. 14, 1952	165.48	Jan. 17, 1957	168.12
Nov. 16	168.40	Nov. 18	170.10	Apr. 24	168.18
Apr. 25, 1949	168.90	May 25, 1953	168.50	Apr. 8, 1958	a172.91
Nov. 16	168.93	Nov. 24	173.80	July 22	a168.15
Apr. 11, 1950	168.89	Apr. 21, 1954	159.0		

1N/7-28Q1. M. H. Gilman, formerly Joshua Terrace. Depth about 412 ft. Altitude about 2,480 ft.

Nov. 17, 1947	179.51	Nov. 18, 1952	176.5	Apr. 25, 1956	178.5
Nov. 16, 1948	179.33	May 25, 1953	177.0	Apr. 24, 1957	178.41
Apr. 25, 1949	180.85	Nov. 24	191.4		
Nov. 16	179.3	Apr. 20, 1955	192.2		

1N/7-33C1 (1N/7E-33-2a). E. W. Hall. Altitude about 2,540 ft.

Nov. 15, 1946	227.96	Apr. 7, 1948	231.67	Nov. 16, 1949	232.56
Apr. 16, 1947	231.73	Nov. 16	231.62	Apr. 11, 1950	231.69
Nov. 17	231.82	Apr. 26, 1949	234.60		

1N/8-1B1. Royer. Altitude about 1,890 ft. Measurements by Geological Survey.

Apr. 27, 1952	124.06	Apr. 16, 1955	124.62	Jan. 9, 1957	124.93
May 28	124.08	May 19	124.58	Feb. 7	124.95
July 9	124.12	June 17	124.66	Mar. 5	124.96
Aug. 6	b127.09	July 21	124.69	Apr. 3	124.91
Oct. 4	124.30	Aug. 24	124.73	May 7	124.90
Jan. 26, 1953	124.45	Sep. 23	124.74	June 6	124.98
Feb. 20	d124.40	Oct. 17	124.9	July 5	124.96
Mar. 27	124.46	Nov. 22	124.75	Aug. 6	124.98
July 10	124.51	Dec. 21	124.75	Sep. 9	124.98
Aug. 8	124.53	Jan. 24, 1956	124.79	Oct. 7	125.02
Sep. 9	124.54	Mar. 1	124.73	Nov. 7	125.04
Nov. 22	124.59	Apr. 4	124.74	Dec. 9	125.00
Dec. 23	a124.60	May 1	124.74	Jan. 10, 1958	125.00
Mar. 4, 1954	124.54	June 5	124.78	Feb. 10	124.99
Mar. 31	124.54	July 2	124.79	Mar. 11	124.95
May 5	124.54	Aug. 3	124.83	Apr. 3	125.21
Aug. 24	124.62	Sep. 5	124.85	May 14	124.91
Sep. 24	124.63	Oct. 4	124.89	June 14	124.98
Dec. 22	d124.67	Nov. 6	124.92	July 14	125.07
Mar. 16, 1955	124.64	Dec. 3	124.93	Aug. 12	125.05

a. Measurement by Geological Survey.

c. Pumped recently.

b. Pumping.

1N/8-1D1 (1N/8E-1-2). H. L. Cartwright, formerly Hugh Marshall.
Depth about 212 ft. Altitude 1,951.0 ft.

Date	Water level	Date	Water level	Date	Water level
Dec. 6, 1939	166.40	Dec. 15, 1941	166.52	Nov. 25, 1952	167.70
Feb. 2, 1940	166.40	Apr. 12, 1946	166.82	May 27, 1953	167.27
Feb. 17	166.40	Nov. 14	166.90	Nov. 30	169.90
Apr. 1	166.39	Apr. 10, 1947	166.98	Apr. 22, 1954	165.10
Aug. 1	166.48	Nov. 21	168.41	Dec. 15	167.70
Sep. 6	166.45	Apr. 29, 1949	167.32	Apr. 21, 1955	167.70
Oct. 11	166.48	Nov. 18	166.83	Dec. 20	168.80
Nov. 4	166.47	Apr. 14, 1950	167.91	Apr. 27, 1956	167.78
Dec. 6	166.43	Nov. 9	167.29	Jan. 18, 1957	167.80
Jan. 7, 1941	166.48	Mar. 15, 1951	167.49	Apr. 26	167.86
Feb. 9	166.50	Nov. 15	167.26	Dec. 18	167.88
June 1	166.48	Apr. 16, 1952	167.22	Apr. 2, 1958	abl67.81
Oct. 1	166.55	Apr. 28	abl67.52	July 22	al67.93

1N/8-9L1 (1N/8E-9-3). W. D. Fulton, formerly Elkins. Depth about 386 ft. Altitude 2,179.6 ft.

Jan. 7, 1941	320.09	Nov. 16, 1948	320.59	Nov. 24, 1953	318.89
May 28	320.09	Apr. 14, 1950	320.72	Dec. 14, 1954	320.39
Apr. 12, 1946	320.58	Nov. 9	320.58	Apr. 20, 1955	321.39
Nov. 6	320.44	Mar. 15, 1951	320.56	Dec. 20	321.54
Apr. 11, 1947	320.97	July 9, 1952	a320.85	Apr. 25, 1956	318.89
Nov. 17	320.64	Nov. 18	316.89	Jan. 17, 1957	320.19
Apr. 7, 1948	320.62	May 25, 1953	316.89	Apr. 24	319.99

- a. Measurement by Geological Survey.
- b. Pumping.

1N/8-12G1 (1N/8E-12-1a). William Hockett. Depth about 420 ft.
Altitude 1,972.7 ft.

Date	Water level	Date	Water level	Date	Water level
May 3, 1940	194.85	Feb. 18, 1953	a196.28	May 1, 1956	ad196.64
June 27	194.77	May 27	196.5	June 5	ad196.61
Aug. 1	194.80	July 10	a196.27	July 2	ad196.69
Sep. 6	194.85	Nov. 22	a196.50	Aug. 3	a196.68
Oct. 11	194.91	Dec. 23	a196.48	Sep. 5	ab197.76
Nov. 4	194.86	Mar. 4, 1954	a196.39	Oct. 4	a197.68
Jan. 7, 1941	194.91	Apr. 1	a196.45	Nov. 6	a196.77
Feb. 9	194.76	Apr. 22	207.2	Dec. 3	a196.78
Mar. 4	194.89	May 5	a196.40	Jan. 9, 1957	a196.78
Apr. 8	194.88	Aug. 24	a196.52	Jan. 18	196.77
June 1	194.89	Sep. 24	a196.51	Feb. 7	a196.85
Aug. 1	194.83	Oct. 21	a196.56	Mar. 5	a196.81
Oct. 1	194.91	Nov. 20	a196.56	Apr. 3	ab203.54
Dec. 15	194.94	Dec. 15	196.4	Apr. 26	196.87
Feb. 16, 1942	194.94	Dec. 22	a196.53	May 7	a196.78
Aug. 1	194.94	Jan. 21, 1955	ad196.55	June 6	a196.75
Oct. 15	195.03	Feb. 22	a196.54	July 5	a196.78
Apr. 12, 1946	195.49	Mar. 16	a196.53	Aug. 6	a196.86
Apr. 11, 1947	195.61	Apr. 16	a196.57	Sep. 9	a196.84
Nov. 21	195.84	Apr. 21	196.5	Oct. 7	a196.84
Apr. 9, 1948	194.96	May 19	a196.55	Nov. 7	a196.96
Nov. 18	195.74	June 17	a196.48	Dec. 9	a196.90
Nov. 18, 1949	195.3	Aug. 24	ad196.55	Dec. 18	196.9
Apr. 14, 1950	196.02	Sep. 23	ad196.54	Jan. 10, 1958	a196.73
Nov. 15, 1951	202.76	Oct. 18	a196.60	Feb. 10	a196.89
Apr. 28, 1952	ad96.02	Nov. 22	a196.63	Mar. 11	ab196.98
May 28	ad196.92	Dec. 20	197.1	Apr. 3	a196.86
July 9	ab196.65	Dec. 21	a196.59	May 14	a196.84
Aug. 7	a196.02	Mar. 1, 1956	a196.60	July 14	a196.93
Oct. 4	a196	Apr. 4	ad196.63	Aug. 12	a196.94
Jan. 26, 1953	a196.25	Apr. 27	201.7		

1N/8-21F1 (1N/8E-21C1). G. A. Rubens, formerly U. S. Desert Land Co. Depth about 350 ft. Altitude about 2,160 ft.

Apr. 7, 1948	298.25	Mar. 13, 1951	298.17	Apr. 21, 1954	315.40
Nov. 16	298.32	Nov. 13	298.45	Dec. 13	297.60
Jan. 3, 1949	304.25	May 27, 1952	297.70	Apr. 20, 1955	299.10
Apr. 25	298.22	Nov. 18	298.50	Dec. 20	312.40
Nov. 16	298.35	Nov. 25	a299.80	Apr. 25, 1956	303.5
Apr. 11, 1950	298.24	May 25, 1953	300.10		
Nov. 7	298.30	Nov. 24	307.20		

- a. Measurement by Geological Survey.
b. Pumping.
d. Pumped recently.

1N/8-26G1 (1N/8E-26-1a). William Schultze, formerly A. J. Bremer.
Depth about 603 ft. Altitude 2,414.0 ft.

Date	Water level	Date	Water level	Date	Water level
Mar. 22, 1940	471.65	Apr. 9, 1946	471.66	Apr. 12, 1950	484.08
May 3	471.63	Nov. 8	474.87	Nov. 14, 1951	481.17
Feb. 9, 1941	470.50	Nov. 17, 1947	476.09	Nov. 20, 1952	471.85
Apr. 8	470.42	Nov. 17, 1948	473.17		
May 28	471.63	Apr. 27, 1949	478.19		

1N/8-36A1 (1N/8E-36-1a). Twentynine Palms County Water District,
formerly Desert Estates Mutual Water Co. Depth about 292 ft. Altitude
2,129.7 ft.

Feb. 17, 1940	131.40	Jan. 7, 1941	131.54	Aug. 1, 1942	131.66
Apr. 1	131.44	Feb. 9	131.55	Oct. 15	131.77
June 3	131.44	Mar. 4	131.58	Mar. 21, 1951	133.88
June 27	131.46	Apr. 8	131.45	Dec. 10, 1953	134.78
Aug. 1	131.48	June 1	131.42	Jan. 25, 1956	140.45
Sep. 6	131.49	Aug. 1	131.43	Feb. 5, 1957	142.45
Oct. 11	131.50	Oct. 1	131.48	Apr. 25	141.69
Nov. 4	131.51	Feb. 16, 1942	131.60		
Dec. 6	131.56	Apr. 20	131.63		

1N/9-4N1 (1N/9E-4-3a). A. Krushat (west well). Depth about 136 ft.
Altitude 1,786.9 ft.

Apr. 1, 1940	19.80	Feb. 18, 1953	a21.80	Nov. 20, 1954	a22.61
Apr. 11, 1946	20.83	Mar. 27	a21.71	Dec. 15	22.50
Nov. 13	21.67	Apr. 30	a21.66	Dec. 22	a22.59
Apr. 10, 1947	21.34	May 27	21.90	Jan. 20, 1955	a22.50
Nov. 20	21.95	May 29	a21.73	Feb. 20	a22.45
Apr. 6, 1948	21.90	July 10	a22.19	Mar. 16	a22.43
Nov. 17	22.27	Aug. 8	a22.19	Apr. 15	a22.19
Jan. 3, 1949	21.91	Sep. 9	a22.51	Apr. 21	22.21
Apr. 28	21.43	Nov. 22	a22.55	May 17	a22.41
Nov. 18	22.85	Nov. 27	22.50	June 17	a22.47
Apr. 13, 1950	21.76	Dec. 23	a22.42	July 21	a22.53
Nov. 9	22.45	Jan. 23, 1954	a22.04	Aug. 24	a22.51
Mar. 15, 1951	21.70	Mar. 3	a21.84	Sep. 23	a22.52
Nov. 15	22.37	Apr. 1	a21.86	Oct. 18	a22.46
Apr. 16, 1952	21.77	Apr. 22	21.80	Nov. 20	21.65
July 10	a22.25	May 4	a21.82	Nov. 22	a22.14
July 11	ae22.39	June 24	a22.28	Dec. 21	a21.59
Aug. 7	af22.39	July 21	a22.52	Jan. 23, 1956	a21.79
Oct. 3	a22.56	Aug. 24	a22.53	Mar. 1	a21.48
Nov. 25	22.35	Sep. 24	a22.63	Apr. 4	a21.71
Jan. 23, 1953	a21.94	Oct. 21	a22.60	Apr. 26	21.56

a. Measurement by Geological Survey.
e. Recorder installed.
f. Recorder removed.

Continued

1N/9-4M1. --Continued

Date	Water level	Date	Water level	Date	Water level
May 1, 1956	a21.98	Feb. 7, 1957	a21.59	Nov. 7, 1957	a21.78
June 4	a21.99	Mar. 5	a22.57	Dec. 9	a21.86
July 2	a21.95	Apr. 3	a22.01	Dec. 18	21.29
Aug. 3	a22.20	Apr. 26	21.94	Jan. 10, 1958	a21.25
Sep. 5	a22.58	May 7	a21.75	Feb. 10	a21.31
Oct. 4	a22.49	June 6	a22.00	Mar. 11	a22.22
Nov. 6	a22.44	July 5	a21.88	Apr. 4	a21.38
Dec. 3	a21.86	Aug. 6	a22.02	May 14	Filled
Jan. 9, 1957	a21.69	Sep. 9	a22.04		to 20 ft.
Jan. 18	21.98	Oct. 7	a22.09		

1N/9-4N2 (1N/9E-4-3b). A. Krushat (east well).

Altitude 1,787.4 ft.

Apr. 1, 1940	30.08	Sep. 6, 1940	31.30	Feb. 9, 1941	30.54
May 3	30.25	Oct. 11	31.30	Mar. 4	30.44
June 3	30.57	Nov. 4	31.20	Apr. 4, 1958	dry ^a
June 27	30.83	Dec. 6	30.90		
Aug. 1	31.15	Jan. 7, 1941	30.75		

1N/9-4N3. U. S. Navy. Depth about 500 ft. Altitude about 1,787 ft.

Nov. 13, 1946	11.62	Nov. 27, 1953	16.19	Jan. 18, 1957	12.98
Feb. 13, 1952	11.84	Apr. 22, 1954	23.50	Apr. 26	12.79
Nov. 25	13.10	Dec. 20, 1955	12.57	Dec. 18	12.91
May 27, 1953	15.10	Apr. 26, 1956	12.58	Apr. 4, 1958	12.83

1N/9-5M1. Alice Critchfield. Depth about 60 ft. Altitude about 1,800 ft. Measurements by Geological Survey.

Apr. 28, 1952	26.03	Apr. 30, 1953	26.57	Mar. 4, 1954	d28.65
May 28	28.04	May 29	26.76	Apr. 1	b30.1
July 9	26.40	July 10	26.79	May 4	d28.54
July 30	d29.12	Aug. 8	27.00	July 23	26.83
Aug. 1	26.77	Sep. 9	28.04	Nov. 20	27.04
Oct. 3	26.88	Nov. 22	26.74	Jan. 20, 1955	26.94
Jan. 28, 1953	26.69	Dec. 23	d27.48	Mar. 16	26.75
Feb. 18	24.90	Jan. 23, 1954	d26.58		

- a. Measurement by Geological Survey.
- b. Pumping.
- d. Pumped recently.

1N/9-5Q1. M. C. Elliott. Depth about 94 ft. Altitude 1,788.2 ft.

Date	Water level	Date	Water level	Date	Water level
Feb. 2, 1940	17.55	Aug. 6, 1952	a18.56	Apr. 15, 1955	a18.77
Feb. 17	17.42	Aug. 7	ae18.43	Apr. 21	18.76
Apr. 1	17.36	Sep. 10	a18.63	May 17	a18.72
June 3	17.55	Oct. 23	a18.80	June 17	a18.75
June 27	17.68	Nov. 7	a18.81	July 21	a18.85
Aug. 1	17.87	Dec. 15	af18.77	Aug. 24	a18.96
Sep. 6	17.92	Jan. 11, 1953	a18.80	Sep. 23	a19.06
Oct. 11	17.95	Jan. 23	a18.01	Oct. 18	a19.11
Nov. 4	17.95	Jan. 28	a18.14	Nov. 22	a19.20
Dec. 6	17.82	Feb. 18	a18.35	Dec. 20	19.17
Jan. 7, 1941	17.72	Mar. 27	a18.51	Dec. 21	a19.18
Feb. 9	17.63	Apr. 30	a18.50	Jan. 23, 1956	a19.12
Mar. 4	17.58	May 27	18.40	Mar. 1	a18.85
Apr. 8	17.57	May 29	a18.53	Apr. 26	17.90
June 1	17.61	July 10	a18.67	Jan. 18, 1957	19.36
Aug. 1	17.99	Aug. 8	a18.75	Feb. 7	a19.30
Oct. 1	18.03	Sep. 9	a18.85	Mar. 5	a19.23
Dec. 15	17.80	Nov. 22	a19.03	Apr. 3	a19.18
Feb. 16, 1942	18.94	Nov. 27	19.00	Apr. 26	19.15
Apr. 20	15.10	Dec. 23	a18.94	May 7	a19.13
Aug. 1	17.65	Jan. 23, 1954	a18.84	June 6	a19.14
Oct. 15	17.63	Mar. 4	a18.75	July 5	a19.16
Apr. 11, 1946	18.53	Apr. 1	a18.68	Aug. 6	a19.21
Nov. 20, 1947	18.52	Apr. 22	19.00	Sep. 9	a19.35
Apr. 6, 1948	18.12	May 4	a18.73	Oct. 7	a19.42
Nov. 17	18.60	June 24	a18.76	Nov. 7	a19.43
Apr. 28, 1949	18.18	July 21	a18.83	Dec. 9	a19.48
Nov. 18	18.68	Aug. 24	a18.93	Dec. 18	19.47
Apr. 14, 1950	18.20	Sep. 24	a19.04	Jan. 10, 1958	a19.42
Nov. 9	18.64	Oct. 21	a19.08	Feb. 10	a19.33
Mar. 15, 1951	17.95	Nov. 20	a19.12	Mar. 11	a19.25
Nov. 15	18.56	Dec. 15	18.54	Apr. 8	a19.21
Apr. 16, 1952	18.43	Dec. 22	a19.08	May 14	a19.15
Apr. 29	a18.16	Jan. 20, 1955	a18.96	June 14	a19.39
May 28	a18.26	Feb. 22	a18.88	July 14	a19.23
July 9	a18.42	Mar. 16	a18.81	Sep. 11	a19.36

- a. Measurement by Geological Survey.
- e. Recorder installed.
- f. Recorder removed.

1N/9-5Q2. Frank Rhode, formerly Singleton. Depth about 110 ft.
Altitude about 1,800 ft. Measurements by Geological Survey.

Date	Water level	Date	Water level	Date	Water level
Apr. 29, 1952	27.52	Oct. 21, 1954	28.41	Oct. 4, 1956	28.71
May 28	27.60	Nov. 20	28.37	Nov. 6	28.70
July 9	27.84	Dec. 22	28.25	Dec. 3	28.61
Aug. 6	27.90	Jan. 20, 1955	28.16	Jan. 9, 1957	28.55
Oct. 3	28.10	Feb. 22	28.28	Feb. 7	28.52
Jan. 23, 1953	27.92	Mar. 16	28.05	Mar. 5	28.35
Feb. 18	27.89	Apr. 16	28.03	Apr. 3	28.36
Mar. 27	27.88	May 17	28.04	May 7	28.38
Apr. 30	27.85	June 17	28.21	June 6	28.55
May 29	27.95	July 21	28.37	July 5	28.62
July 10	28.13	Aug. 24	28.48	Aug. 6	28.72
Aug. 8	28.24	Sep. 23	28.50	Sep. 9	28.81
Sep. 9	28.28	Oct. 18	28.52	Oct. 7	28.82
Nov. 22	28.26	Nov. 22	28.60	Nov. 7	28.73
Dec. 23	28.15	Dec. 21	28.38	Dec. 9	28.63
Jan. 23, 1954	28.05	Jan. 23, 1956	28.29	Jan. 10, 1958	28.53
Mar. 4	28.10	Mar. 1	28.20	Feb. 10	28.47
Apr. 1	27.93	Apr. 4	28.18	Mar. 11	28.41
May 4	27.96	May 1	28.19	Apr. 8	28.39
June 24	28.20	June 5	28.35	May 14	28.39
July 23	28.28	July 2	28.55	June 14	28.68
Aug. 24	28.39	Aug. 3	28.61	July 14	28.74
Sep. 24	28.39	Sep. 5	28.70	Aug. 12	28.86

1N/9-5Z1 (1N/9E-5-4c). M. C. Elliott. Altitude 1,788.2 ft.

Feb. 2, 1940	16.55	Nov. 4, 1940	16.95	Oct. 1, 1941	17.03
Feb. 17	16.42	Dec. 6	16.82	Dec. 15	16.80
Apr. 1	16.36	Jan. 7, 1941	16.72	Apr. 20, 1942	14.10
June 3	16.55	Feb. 9	16.63	Aug. 1	16.65
June 27	16.68	Mar. 4	16.58	Oct. 15	16.63
Aug. 1	16.87	Apr. 8	16.57	Apr. 11, 1946	Well filled.
Sep. 6	16.92	June 1	16.61		
Oct. 11	16.95	Aug. 1	16.99		

1N/9-6E1. H. C. Marshall, formerly Wilson old well. Depth about 120 ft. Altitude about 1,840 ft.

Feb. 17, 1940	59.57	Nov. 30, 1953	65.28	Jan. 18, 1957	63.62
Apr. 12, 1946	62.07	Apr. 22, 1954	63.18	Apr. 26	63.57
Nov. 14	62.48	Dec. 15	65.76	Dec. 18	63.64
Apr. 10, 1947	62.98	Apr. 21, 1955	63.88	Apr. 8, 1958	a63.56
Nov. 15, 1951	62.78	Dec. 22	63.33	July 22	a63.68
Apr. 27, 1952	a62.67	Apr. 27, 1956	63.37		

a. Measurement by Geological Survey.

1N/9-6E2. H. C. Marshall, formerly Wilson new well. Altitude about 1,840 ft.

Date	Water level	Date	Water level	Date	Water level
Nov. 21, 1947	58.46	Mar. 15, 1951	60.50	Apr. 21, 1955	67.33
Apr. 8, 1948	61.15	Nov. 15	61.46	Dec. 22	65.03
Nov. 18	61.26	Apr. 16, 1952	59.35	Apr. 27, 1956	62.08
Apr. 29, 1949	60.58	May 27, 1953	62.33	Jan. 18, 1957	62.25
Nov. 18	61.33	Nov. 30	66.28	Apr. 26	62.28
Nov. 9, 1950	61.37	Dec. 15, 1954	69.83	Dec. 18	62.33

1N/9-6J1 (1N/9E-6-4a). Daisy Bright, formerly Jones. Depth about 65 ft. Altitude 1,820.1 ft.

May 3, 1940	43.58	Apr. 9, 1948	44.48	May 27, 1953	45.55
June 3	43.60	Nov. 17	44.57	Nov. 27	47.42
Aug. 1	43.64	Apr. 28, 1949	44.53	Apr. 22, 1954	46.55
Oct. 11	43.70	Nov. 18	44.75	Dec. 15	46.78
Nov. 4	43.71	Apr. 14, 1950	44.34	Apr. 21, 1955	46.35
Dec. 6	43.63	Nov. 9	43.77	Dec. 20	45.90
Feb. 9, 1941	43.69	Mar. 15, 1951	44.59	Apr. 26, 1956	45.45
Apr. 11, 1946	44.35	Nov. 15	44.79	Jan. 18, 1957	45.76
Nov. 13	43.53	Apr. 16, 1952	44.85	Apr. 26	45.64
Apr. 10, 1947	44.39	Apr. 28	44.73	Dec. 18	45.72
Nov. 20	44.41	Nov. 25	45.60	Apr. 8, 1958	46.21

1N/9-7E1 (1N/9E-7-2a). Smith, formerly Best. Depth 169.0 ft. Altitude about 1,935 ft.

May 3, 1940	161.59	Nov. 21, 1947	163.02	Apr. 29, 1949	168.04
Apr. 12, 1946	165.51	Apr. 8, 1948	165.14	Apr. 28, 1952	dry ^{a/}
Apr. 11, 1947	163.54	Nov. 18	164.87		

1N/9-7G1 (1N/9E-7-1b). Vance Johnson, formerly Marby. Altitude 1,887.9 ft.

May 3, 1940	111.30	Nov. 18, 1949	113.09	Apr. 16, 1952	112.62
Apr. 12, 1946	112.00	Apr. 14, 1950	112.21	May 27, 1953	No access
Nov. 18, 1948	109.36	Nov. 9	112.77		
Apr. 29, 1949	115.48	Apr. 15, 1951	112.51		

a. Measurement by Geological Survey.

1N/9-7H1 (1N/9E-7-1a). P. H. Carson, formerly De Ment. Depth about 110 ft. Altitude 1,843.5 ft.

Date	Water level	Date	Water level	Date	Water level
May 3, 1940	66.95	Jan. 23, 1954	a69.01	Oct. 4, 1956	a69.44
Apr. 12, 1946	67.85	Mar. 4	a69.07	Nov. 6	a69.23
Nov. 14	67.98	Apr. 1	ad68.95	Dec. 3	a69.29
Apr. 11, 1947	67.90	Apr. 22	69.8	Dec. 18	69.30
Nov. 21	67.99	May 4	a68.98	Jan. 9, 1957	a69.35
Apr. 9, 1948	68.01	Aug. 24	a69.11	Jan. 18	69.31
Nov. 18	68.08	Nov. 20	a68.09	Feb. 7	a69.34
Apr. 29, 1949	68.20	Dec. 15	69.90	Mar. 5	a69.21
Nov. 18	68.09	Dec. 22	a69.08	Apr. 3	ab71.44
Nov. 9, 1950	70.12	Jan. 20, 1955	a69.05	Apr. 26	69.44
Nov. 15, 1951	68.40	Feb. 22	a69.05	May 7	a70.19
Apr. 16, 1952	69.50	Apr. 16	a69.02	June 6	a69.24
Apr. 29	a68.50	Apr. 21	69.89	July 5	a69.25
May 28	a68.58	May 17	a69.01	Aug. 6	a69.29
July 9	ab68.72	June 17	a69.10	Sep. 9	a69.38
Aug. 6	a68.80	July 21	a69.04	Oct. 7	a69.39
Oct. 4	a68.94	Aug. 24	a69.04	Nov. 7	a69.31
Jan. 26, 1953	ad68.96	Sep. 23	a69.06	Dec. 9	a69.29
Feb. 18	a69.00	Oct. 18	a69.03	Jan. 10, 1958	a69.26
Mar. 27	ad69.02	Nov. 22	a69.06	Feb. 10	a69.26
Apr. 30	a69.00	Dec. 21	a69.01	Mar. 11	a69.21
May 29	a69.04	Mar. 1, 1956	a69.01	Apr. 9	a69.25
July 10	a69.04	Apr. 4	a69.02	May 14	a70.93
Sep. 9	a69.12	June 5	a69.25	June 14	a69.31
Nov. 22	a69.08	July 2	a69.32	July 14	a69.39
Nov. 30	70.45	Aug. 3	a69.28	Aug. 12	a69.40
Dec. 23	a69.03	Sep. 5	a69.46		

1N/9-8D1 (1N/9E-8-2b). H. E. Brown, formerly F. Furness old well. Altitude 1,817.0 ft.

Apr. 1, 1940	44.26	Apr. 10, 1947	43.04	Nov. 9, 1950	43.16
Mar. 8, 1941	40.80	Nov. 20	43.13	Mar. 15, 1951	42.51
Apr. 20, 1942	40.86	Apr. 8, 1948	43.10	Apr. 16, 1952	44.17
Aug. 1	40.86	Nov. 17	42.39	Apr. 29, 1952	dry a/
Oct. 15	40.99	Apr. 28, 1949	41.99	Apr. 9, 1958	dry a/
Apr. 11, 1946	41.69	Nov. 18	42.20		
Nov. 13	42.94	Apr. 14, 1950	42.60		

- a. Measurement by Geological Survey.
- b. Pumping.
- d. Pumped recently.

1N/9-8D2 (1N/9E-8-2c). H. E. Brown, formerly F. Furness south well. Depth about 70 ft. Altitude 1,820.3 ft.

Date	Water level	Date	Water level	Date	Water level
Feb. 17, 1940	44.01	Apr. 16, 1952	45.37	Apr. 26, 1957	48.72
Apr. 1	44.01	Nov. 25	46.09	Dec. 18	46.15
Apr. 12, 1946	44.87	May 27, 1953	46.09	Apr. 9, 1958	a46.55
Apr. 9, 1948	45.04	Jan. 18, 1957	49.77	July 23	a46.54
Nov. 18, 1949	45.94				

1N/9-8H1. P. H. Carson, formerly Stonecipher. Altitude 1,817.8 ft.

Apr. 16, 1946	48.60	Apr. 29, 1949	50.43	Mar. 15, 1951	well
Nov. 20, 1947	50.40	Nov. 18	51.64		des-
Apr. 6, 1948	50.44	Apr. 14, 1950	50.92		troyed
Nov. 18	49.93	Nov. 9	50.47		

1N/9-8H2. P. H. Carson. Depth 72.5 ft. Altitude about 1,815 ft.

Mar. 15, 1951	43.61	Apr. 22, 1954	45.47	Jan. 18, 1957	44.21
Nov. 15	43.55	Dec. 15	46.32	Apr. 26	44.14
Apr. 16, 1952	47.17	Apr. 21, 1955	43.92	Dec. 18	44.20
May 28, 1953	49.99	Dec. 22	44.02	Apr. 9, 1958	a46.12
Nov. 30	43.97	Apr. 27, 1956	44.08	July 23	a44.55

1N/9-9F1 (1N/9E-9-2a).

Dawn Renner, formerly Deardorf.

Depth about 36 ft. Altitude 1,792.2 ft.

Apr. 1, 1940	25.45	Apr. 10, 1947	25.32	Nov. 17, 1948	26.20
Apr. 11, 1946	25.45	Nov. 21	26.77	Apr. 28, 1949	25.80
Nov. 13	26.80	Apr. 9, 1948	27.70	Nov. 18	Casing pulled

1N/9-9M1 (1N/9E-9-3a). Orin Taylor, formerly Ashold, formerly G. Meade. Depth about 60 ft. Altitude 1,810.4 ft. Measurements by Geological Survey except those for 1940 which are by the San Bernardino County Flood Control District.

Apr. 24, 1940	37.18	Jan. 23, 1954	37.50	Feb. 20, 1955	37.48
May 3	36.86	Mar. 3	37.47	Mar. 16	36.44
Aug. 6, 1952	37.32	Apr. 1	37.49	Apr. 15	37.43
Jan. 23, 1953	37.60	May 5	37.51	May 17	37.45
Feb. 18	37.50	June 25	37.62	June 17	37.59
Mar. 27	37.36	July 21	37.59	July 20	37.64
Apr. 30	37.46	Aug. 24	37.62	Aug. 24	37.70
May 29	37.72	Sep. 24	37.65	Sep. 23	37.70
July 10	37.68	Oct. 21	37.64	Oct. 18	37.64
Aug. 8	37.70	Nov. 20	37.59	Nov. 22	37.63
Sep. 9	37.70	Dec. 22	37.64	Dec. 21	37.62
Nov. 22	37.63	Jan. 20, 1955	37.53	Jan. 23, 1956	37.60

a. Measurement by Geological Survey.

Continued

1N/9-9M1.--Continued

Date	Water level	Date	Water level	Date	Water level
Apr. 4, 1956	37.57	Feb. 7, 1957	37.74	Dec. 9, 1957	37.86
May 1	37.62	Mar. 5	37.66	Jan. 10, 1958	37.82
June 4	37.67	Apr. 3	37.66	Feb. 10	38.21
July 2	37.76	May 7	37.72	Mar. 11	37.69
Aug. 3	37.81	June 6	37.83	Apr. 10	37.69
Sep. 5	37.85	July 5	37.89	May 14	37.77
Oct. 4	37.98	Aug. 6	38.39	June 14	37.95
Nov. 6	37.83	Sep. 9	38.08	July 14	38.02

1N/9-9M2 (1N/9E-9E2). Orin Taylor, formerly Meader (new well).
Depth about 78 ft. Altitude about 1,810 ft.

Nov. 14, 1946	40.60	Apr. 29, 1952	a37.12	Nov. 30, 1953	39.80
Apr. 11, 1947	40.40	May 28	a37.29	Apr. 22, 1954	39.20
Nov. 21	39.59	July 9	ae37.42	Dec. 15	38.59
Apr. 9, 1948	39.08	July 11	a37.37	Apr. 21, 1955	38.57
Nov. 18	38.18	July 19	a37.46	Dec. 20	38.35
Apr. 29, 1949	38.53	July 31	a37.49	Apr. 27, 1956	37.87
Nov. 18	37.41	Aug. 7	a37.52	Jan. 18, 1957	38.04
Apr. 14, 1950	37.22	Oct. 3	af37.64	Apr. 26	38.03
Nov. 9	37.21	Jan. 23, 1953	ad41.55	Dec. 18	38.16
Mar. 15, 1951	37.07	Feb. 18	a40.15	Apr. 10, 1958	a38.01
Nov. 15	37.25	Mar. 27	a39.86		
Apr. 16, 1952	37.10	May 28	40.40		

1N/9-9P1. H. E. Brown. Altitude about 1,800 ft.

Apr. 10, 1947	27.20	Apr. 13, 1950	28.33	May 27, 1953	29.04
Apr. 9, 1948	27.57	Nov. 9	28.28	Apr. 21, 1955	30.50 ^a
Nov. 17	28.23	Mar. 15, 1951	28.42	Apr. 10, 1958	dry ^a
Nov. 18, 1949	28.95	Nov. 25, 1952	29.80		

1N/9-9Q1. Eugene Moffett, formerly Pat Graham Dairy, formerly struck (north well). Depth 48.0 ft. Altitude about 1,800 ft.

Feb. 2, 1940	13.40	Aug. 1, 1942	14.65	Nov. 25, 1952	15.15
Feb. 17	13.37	Oct. 15	14.78	May 27, 1953	15.10
Apr. 1	13.29	Apr. 11, 1946	13.91	Nov. 27	15.50
May 3	13.54	Nov. 13	14.98	Apr. 22, 1954	14.90
June 3	13.92	Apr. 10, 1947	14.21	Dec. 13	15.54
June 27	14.23	Nov. 20	15.08	Apr. 21, 1955	14.94
Aug. 1	14.63	Apr. 6, 1948	14.27	Dec. 20	15.75
Sep. 6	14.75	Nov. 17	15.00	Apr. 26, 1956	15.23
Oct. 11	15.05	Apr. 28, 1949	14.12	Jan. 18, 1957	15.56
Nov. 4	14.47	Nov. 18	15.07	Apr. 26	15.32
Dec. 6	14.13	Apr. 13, 1950	14.24	Dec. 18	15.82
Feb. 9, 1941	13.91	Nov. 9	15.14	Apr. 10, 1958	a15.39
June 1	13.74	Mar. 15, 1951	14.22	July 23	a16.73
Oct. 1	14.54	Nov. 15	15.17		
Apr. 20, 1942	13.35	Apr. 16, 1952	15.02		

a. Measurement by Geological Survey.

d. Pumped recently.

e. Recorder installed.

f. Recorder removed.

1N/9-10D1 (1N/9E-10-2a). C. F. Taylor. Depth about 301 ft.
Altitude about 1,815 ft.

Date	Water level	Date	Water level	Date	Water level
Apr. 1, 1940	272.83	Apr. 28, 1949	272.95	Apr. 22, 1954	273.00
Oct. 1	272.84	Nov. 17	272.82	Dec. 14	275.70
Mar. 4, 1941	272.84	Apr. 13, 1950	272.96	Apr. 21, 1955	273.85
Oct. 1	272.77	Nov. 8	272.66	Dec. 20	274.50
Oct. 1	272.94	Mar. 15, 1951	272.84	Apr. 26, 1956	273.00
Apr. 11, 1946	272.96	Nov. 15	273.00	Jan. 18, 1957	273.02
Nov. 12	273.00	May 7, 1952	a272.90	Apr. 26	274.14
Apr. 9, 1947	272.92	Nov. 25	273.04	Dec. 18	273.0
Nov. 20	272.99	May 27, 1953	280.20	Apr. 10, 1958	a275.98
Apr. 6, 1948	272.78	Nov. 27	273.30		

1N/9-14D1 (1N/9E-14E1). F. A. Kavanagh, formerly Kieferle. Depth about 312 ft. Altitude about 1,805 ft.

Nov. 19, 1948	255.21	Nov. 15, 1951	254.85	Jan. 17, 1957	252.85
Apr. 28, 1949	254.75	Nov. 24, 1952	255.85	Apr. 25	252.22
Nov. 17	256.13	Nov. 27, 1953	256.65	Dec. 17	254.87
Apr. 13, 1950	252.03	Apr. 20, 1955	254.50	Apr. 11, 1958	a255.45
Nov. 8	254.98	Dec. 20	259.55		
Mar. 15, 1951	255.47	Apr. 26, 1956	255.05		

1N/9-14L1 (1N/9E-14-3a). Kellerbrock, formerly Cornwall, formerly Guest. Depth about 228 ft. Altitude about 1,755 ft.

Nov. 14, 1940	208.55	Apr. 13, 1950	208.68	Apr. 20, 1955	222.00
Mar. 4, 1941	208.64	Nov. 8	208.44	Dec. 20	219.50
Apr. 11, 1946	208.53	Mar. 15, 1951	208.79	Apr. 26, 1956	208.85
Nov. 12	208.68	Nov. 15	208.59	Jan. 17, 1957	209.10
Apr. 9, 1947	208.86	May 7, 1952	a208.76	Apr. 25	209.03
Nov. 20	209.19	Nov. 24	208.65	Dec. 17	208.97
Apr. 6, 1948	208.97	May 26, 1953	211.0	Apr. 11, 1958	a211.30
Nov. 18	208.77	Nov. 27	222.70	July 24	a208.99
Jan. 3, 1949	208.69	Apr. 21, 1954	213.20		
Nov. 17	208.70	Dec. 15	217.60		

a. Measurement by Geological Survey.

1N/9-16D1. Whited, B-B Ranch. Depth about 96 ft. Altitude about 1,815 ft. Measurements by Geological Survey.

Date	Water level	Date	Water level	Date	Water level
May 1, 1952	39.40	Dec. 22, 1954	39.73	Dec. 3, 1956	39.91
May 28	40.49	Feb. 20, 1955	39.56	Jan. 9, 1957	39.89
July 9	40.77	Mar. 16	b40.93	Feb. 7	39.79
Aug. 7	d40.85	Apr. 15	39.53	Mar. 5	39.70
Oct. 3	40.75	May 18	39.56	Apr. 3	b50.07
Jan. 26, 1953	39.88	June 17	39.82	May 7	39.78
Feb. 18	40.53	July 20	b43.58	June 6	39.80
Mar. 27	39.51	Aug. 25	d41.70	July 5	39.95
Apr. 30	39.85	Sep. 23	39.82	Aug. 6	40.64
May 29	39.46	Oct. 18	39.87	Sep. 9	41.47
July 10	39.74	Nov. 22	39.82	Aug. 7	40.00
Aug. 8	40.15	Dec. 21	39.79	Nov. 7	39.99
Sep. 9	b42.49	Mar. 1, 1956	39.73	Dec. 9	39.98
Nov. 22	40.07	Apr. 4	b43.91	Jan. 10, 1958	39.38
Dec. 22	39.79	May 1	39.72	Feb. 10	b44.69
Mar. 3, 1954	39.87	June 4	b49.60	Mar. 11	39.82
Apr. 1	d39.69	July 2	39.96	Apr. 16	b48.52
Aug. 24	b41.7	Aug. 3	39.94	May 14	39.98
Sep. 24	40.35	Sep. 5	b42.45	June 14	39.94
Oct. 21	39.99	Oct. 4	40.04	July 14	40.09
Nov. 20	39.55	Nov. 6	b43.51	Aug. 12	40.41

1N/9-16G1. Farrington. Depth 156.0 ft. Altitude about 1,800 ft.

Apr. 8, 1948	9.89	July 10, 1953	a10.62	Apr. 21, 1955	10.16
Nov. 17	10.15	Aug. 8	a10.64	May 17	a10.26
Apr. 28, 1949	9.75	Sep. 10	a10.75	June 17	a10.63
Nov. 18	10.23	Nov. 22	a10.59	July 20	a10.64
Apr. 13, 1950	9.73	Nov. 27	10.61	Aug. 24	a10.70
Nov. 8	10.02	Dec. 23	a10.44	Sep. 23	a10.75
Mar. 15, 1951	9.68	Jan. 23, 1954	a10.29	Oct. 18	a10.79
Nov. 15	9.95	Mar. 3	a10.17	Nov. 22	a10.74
Apr. 16, 1952	9.60	Apr. 1	a10.31	Dec. 20	10.57
May 7	a 8.76	Apr. 22	11.20	Dec. 21	a10.57
May 28	a 9.95	May 5	a10.28	Jan. 23, 1956	a10.50
July 9	a10.14	June 24	a10.53	Mar. 1	a10.38
Aug. 6	a10.77	July 21	a10.56	Apr. 4	a10.37
Aug. 7	ae10.65	Aug. 24	a10.69	Apr. 26	10.52
Aug. 8	a10.67	Sep. 24	a10.74	May 1	a10.44
Aug. 14	af10.59	Oct. 21	a10.62	June 4	a10.59
Nov. 25	10.63	Nov. 20	a10.50	July 2	a10.74
Jan. 29, 1953	a10.34	Dec. 15	10.48	Aug. 3	a10.89
Feb. 18	a10.20	Dec. 22	a10.37	Sep. 5	a10.99
Mar. 28	a10.08	Jan. 20, 1955	a10.27	Oct. 4	a10.81
Apr. 30	a10.22	Feb. 20	a10.18	Nov. 6	a10.83
May 27	10.35	Mar. 16	a10.14	Dec. 3	a10.78
May 29	a10.37	Apr. 15	a10.16	Jan. 9, 1957	a10.66

a. Measurement by Geological Survey.

b. Pumping.

d. Pumped recently.

e. Recorder installed.

f. Recorder removed.

Continued

1N/9-16G1.--Continued

Date	Water level	Date	Water level	Date	Water level
Jan. 18, 1957	10.60	Aug. 6, 1957	a11.32	Mar. 11, 1958	a10.63
Feb. 7	a10.53	Sep. 9	a11.60	Apr. 11	a10.61
Mar. 5	a11.22	Oct. 7	a11.18	May 14	a10.88
Apr. 3	a10.83	Nov. 7	a11.01	June 14	a11.21
Apr. 26	10.80	Dec. 9	a10.84	July 14	a11.13
May 7	a10.92	Dec. 18	10.87	Aug. 12	a11.33
June 6	ab22.89	Jan. 10, 1958	a10.79		
July 5	a11.04	Feb. 10	a10.70		

1N/9-16H1. Farrington. Depth about 56 ft. Altitude about 1,800 ft.

Apr. 8, 1948	14.41	Apr. 16, 1952	14.20	Dec. 20, 1955	15.25
Nov. 17	14.16	May 7	a14.33	Apr. 26, 1956	14.96
Apr. 28, 1949	13.81	Nov. 25	15.20	Jan. 18, 1957	15.10
Nov. 18	17.00	May 27, 1953	15.30	Apr. 26	14.90
Apr. 13, 1950	14.11	Nov. 27	15.60	Dec. 18	15.22
Nov. 8	14.61	Apr. 22, 1954	14.80	Apr. 11, 1958	a14.93
Mar. 15, 1951	13.97	Dec. 15	15.12	July 23	a16.22
Nov. 15	14.60	Apr. 21, 1955	14.67		

1N/9-17E1 (1N/9E-17F1). Owner unknown, formerly Barry, formerly Lord.
Depth about 130 ft. Altitude about 1,870 ft.

Apr. 12, 1946	108.25	Apr. 1, 1954	a107.52	July 2, 1956	a107.82
Nov. 14	107.78	Apr. 22	115.12	Aug. 3	a107.86
Apr. 11, 1947	108.32	May 4	a107.55	Sep. 5	a107.89
Nov. 21	106.67	June 24	a107.62	Oct. 4	ab107.93
Apr. 9, 1948	106.70	Aug. 24	a107.64	Nov. 6	ab107.94
Nov. 18	106.83	Sep. 24	a107.65	Dec. 3	a107.96
Apr. 29, 1949	111.28	Oct. 21	a107.65	Jan. 9, 1957	a107.95
Nov. 18	110.57	Nov. 20	a107.65	Jan. 18	107.97
Apr. 14, 1950	109.91	Dec. 15	107.70	Feb. 7	a107.94
Nov. 9	108.29	Dec. 22	a107.66	Mar. 5	a107.89
Mar. 15, 1951	106.86	Jan. 21, 1955	ad107.90	Apr. 3	ab108.18
Nov. 15	108.50	Mar. 16	ad107.57	Apr. 26	107.94
Apr. 16, 1952	107.88	Apr. 16	a107.60	May 7	a107.88
Apr. 29	a114.14	Apr. 21	114.20	June 6	a107.92
May 28	a107.06	May 17	a107.60	July 5	a107.95
July 9	ab107.48	June 17	a107.65	Aug. 6	a107.98
Aug. 7	ab110.08	July 21	ad107.70	Sep. 9	ab108.5
Oct. 4	a109.66	Aug. 24	a107.69	Oct. 7	ad108.02
Jan. 26, 1953	a107.44	Sep. 23	a107.71	Nov. 7	a108.01
Mar. 27	a107.48	Oct. 18	a107.71	Dec. 9	a107.99
Apr. 30	a107.49	Nov. 22	a107.73	Dec. 18	108.00
May 28	108.70	Dec. 21	a107.73	Jan. 10, 1958	a107.96
July 10	a107.53	Dec. 22	107.70	Feb. 10	ad107.98
Sep. 9	a107.53	Jan. 23, 1956	a107.74	Mar. 11	ab108.00
Nov. 22	a107.60	Mar. 1	a107.69	Apr. 16	ad107.91
Nov. 30	111.66	Apr. 4	a107.71	May 14	a107.93
Dec. 23	a107.61	Apr. 27	107.68	June 14	a107.99
Jan. 23, 1954	a107.58	May 1	a107.74	July 14	a108.05
Mar. 4	a107.55	June 5	ab107.99	Aug. 12	a108.07

e. Measurement by Geological Survey.

d. Pumped recently.

b. Pumping.

1N/9-19A1. J. E. Booth, formerly W. F. Johnson, formerly Wilson.
Altitude about 1,910 ft.

Date	Water level	Date	Water level	Date	Water level
Apr. 12, 1946	136.86	Nov. 9, 1950	137.22	Apr. 21, 1955	141.24
Nov. 14	136.82	Mar. 15, 1951	137.32	Dec. 20	136.69
Apr. 11, 1947	136.97	Nov. 15	137.32	Apr. 27, 1956	137.51
Nov. 21	137.11	Apr. 16, 1952	137.34	Jan. 18, 1957	136.80
Apr. 9, 1948	136.93	Apr. 29	a136.88	Apr. 26	136.88
Nov. 18	137.01	May 28, 1953	146.64	Dec. 18	136.94
Apr. 29, 1949	141.64	Nov. 30	141.24	Apr. 18, 1958	a138.30
Nov. 18	137.16	Apr. 22, 1954	147.14	July 24,	a137.74
Apr. 14, 1950	137.31	Dec. 15	137.14		

1N/9-20A1. Cora Shuey, formerly McCallum. Depth about 52 ft.
Altitude about 1,815 ft.

Apr. 12, 1946	33.82	Nov. 15, 1951	37.65	Dec. 20, 1955	39.15
Nov. 14	33.95	Apr. 16, 1952	37.99	Apr. 27, 1956	39.10
Nov. 18, 1948	35.94	May 1	a38.34	Apr. 26, 1957	39.29
Nov. 18, 1949	36.09	May 28, 1953	38.90	Apr. 18, 1958	a39.30
Apr. 14, 1950	36.07	Apr. 22, 1954	38.74	July 24	a39.41
Nov. 9	35.42	Dec. 15	38.40		
Mar. 15, 1951	36.16	Apr. 21, 1955	39.51		

1N/9-21E1. H. Smith. Depth about 88 ft. Altitude about 1,840 ft.					
Apr. 16, 1946	50.78	Apr. 16, 1952	43.74	Apr. 21, 1955	42.11
Nov. 21, 1947	43.24	May 1	a41.50	Dec. 20	42.15
Apr. 9, 1948	43.89	May 28	a41.55	Apr. 27, 1956	43.00
Nov. 18	44.54	July 9	a41.60	Jan. 18, 1957	43.43
Apr. 29, 1949	55.59	Aug. 7	a41.64	Apr. 26	42.45
Nov. 18	43.65	May 28, 1953	42.30	Dec. 18	42.48
Apr. 14, 1950	43.67	Sep. 9	a42.10	Apr. 18, 1958	a42.61
Nov. 9	43.75	Nov. 30	44.20	July 24	a42.97
Mar. 15, 1951	43.73	Apr. 22, 1954	42.20		
Nov. 15	43.79	Dec. 15	42.12		

1N/9-21E2. H. Smith. Depth about 100 ft. Altitude about 1,845 ft.
Measurements by Geological Survey.

Oct. 3, 1952	44.48	Jan. 23, 1954	44.95	Jan. 20, 1955	44.88
Jan. 26, 1953	44.60	Mar. 3	44.80	Feb. 20	44.86
Feb. 18	44.56	Apr. 1	44.78	Mar. 16	44.84
Mar. 27	44.64	May 5	44.79	Apr. 15	44.86
Apr. 30	44.69	July 23	44.88	May 18	44.87
July 10	d44.73	Aug. 24	44.90	June 17	44.90
Aug. 8	44.75	Sep. 24	44.90	July 20	45.00
Sep. 9	b49.13	Oct. 21	44.91	Aug. 24	44.96
Nov. 22	d44.82	Nov. 20	44.90		
Dec. 23	44.81	Dec. 22	44.90		

Measurements dis-
continued

- a. Measurement by Geological Survey.
- b. Pumping.
- d. Pumped recently.

1N/9-22B1. James Cagney, formerly Schenck. Depth about 309 ft.
Altitude about 1,810 ft.

Date	Water level	Date	Water level	Date	Water level
Apr. 11, 1946	267.14	Apr. 28, 1949	267.61	May 7, 1952	a267.20
Nov. 12	267.11	Nov. 17	267.16	Nov. 24	270.10
Apr. 9, 1947	266.70	Apr. 13, 1950	267.80	May 26, 1953	268.90
Nov. 20	267.16	Nov. 8	269.72	Nov. 27	270.93
Apr. 6, 1948	267.16	Mar. 15, 1951	267.80		
Nov. 18	267.42	Nov. 15	270.00		

1N/9-22C1. G. V. Michels, east well. Depth 50 ft. Altitude 1,814.1 ft.

Feb. 17, 1940	41.55	Nov. 15, 1951	40.07	Apr. 26, 1956	40.77
Apr. 1	38.15	Apr. 16, 1952	39.88	Jan. 17, 1957	40.75
Apr. 10, 1946	39.32	May 7	ad42.50	Apr. 25	41.00
Nov. 20, 1947	39.64	Nov. 24	40.10	Dec. 17	41.04
Nov. 17, 1949	47.65	Apr. 21, 1954	44.50	Apr. 23, 1958	a44.35
Apr. 13, 1950	39.57	Dec. 15	38.63	July 24	a47.00
Nov. 8	40.08	Apr. 20, 1955	40.45		
Mar. 15, 1951	39.64	Dec. 20	40.70		

1N/9-22C2 (1N/9E-22-2h). Owner unknown, formerly Strand, (cased well). Depth 59.7 ft. Altitude 1,805.2 ft.

Feb. 17, 1940	32.07	Dec. 15, 1941	32.83	Mar. 15, 1951	33.39
Apr. 1	32.18	Feb. 16, 1942	32.72	Nov. 15	33.68
May 3	32.77	Apr. 20	33.20	Apr. 16, 1952	33.33
June 3	33.00	Aug. 1	33.22	May 7	a33.56
June 27	32.88	Oct. 15	33.19	Nov. 24	35.05
Sep. 6	32.97	Apr. 11, 1946	33.32	May 26, 1953	34.25
Oct. 11	32.87	Nov. 12	33.36	Nov. 27	34.55
Nov. 4	32.77	Apr. 9, 1947	33.20	Apr. 21, 1954	32.95
Dec. 6	32.59	Nov. 20	33.57	Apr. 20, 1955	34.33
Jan. 7, 1941	32.57	Apr. 8, 1948	33.76	Apr. 26, 1956	34.57
Feb. 9	32.47	Nov. 17	33.59	Jan. 17, 1957	34.33
Mar. 4	32.33	Jan. 3, 1949	33.55	Apr. 25	34.44
Apr. 8	32.35	Apr. 28	33.28	Apr. 23, 1958	a35.46
June 1	32.60	Nov. 17	33.90	July 24	a35.08
Aug. 1	32.87	Apr. 13, 1950	33.17		
Oct. 1	33.23	Nov. 8	32.74		

- a. Measurement by Geological Survey
d. Pumped recently.

1N/9-22C4 (1N/9E-22-2g). Owner unknown, formerly Strand,
(open well). Altitude 1,805.9 ft.

Date	Water level	Date	Water level	Date	Water level
Feb. 17, 1940	34.51	Jan. 7, 1941	34.76	Apr. 20, 1942	34.65
Apr. 1	34.66	Feb. 9	34.70	Aug. 1	35.48
May 3	34.58	Mar. 4	34.60	Oct. 15	35.50
June 3	34.88	Apr. 8	34.60	Apr. 11, 1946	35.31
June 27	35.01	June 1	34.95	Nov. 12	35.59
Sep. 6	35.21	Aug. 1	34.48	Apr. 9	35.72
Oct. 11	35.22	Oct. 1	35.17	Nov. 20	36.09
Nov. 4	35.19	Dec. 15	34.91	Apr. 8, 1948	destroyed
Dec. 6	34.97	Feb. 16, 1942	34.79		and covered

1N/9-22D2 (1N/9E-22D1). Rico Watrus, formerly R. Michels. Altitude about 1,810 ft.

Feb. 17, 1940	39.43	Apr. 13, 1950	40.79	Apr. 25, 1956	44.58
Apr. 1	39.53	Nov. 8	41.20	Jan. 17, 1957	43.03
Apr. 11, 1946	40.61	Mar. 15, 1951	40.84	Apr. 25	44.64
Nov. 20, 1947	41.65	Apr. 16, 1952	44.55	Dec. 17	43.53
Apr. 8, 1948	40.61	Dec. 15, 1954	42.90	Apr. 23, 1958	a42.49
Nov. 17	43.95	Apr. 20, 1955	42.15	July 24	a42.97
Nov. 17	41.25	Dec. 20	43.05		

1N/9-22E1 (1N/9E-22M1, 1N/9E-22-2a). W. B. Hatch. Depth 87 ft.
Altitude 1,827.0 ft.

Jan. 16, 1940	50.90	Oct. 1, 1941	51.19	Nov. 15, 1951	53.88
Feb. 2	50.84	Dec. 15	51.02	Apr. 16, 1952	52.22
Feb. 17	50.84	Feb. 16, 1942	51.00	May 2	a52.08
Apr. 1	50.86	Apr. 20	51.13	Nov. 24	52.90
May 3	50.99	Aug. 1	51.23	May 26, 1953	52.70
June 3	51.00	Oct. 15	51.29	Nov. 27	52.80
June 27	51.03	Apr. 10, 1946	51.75	Apr. 21, 1954	57.15
Aug. 1	51.05	Nov. 12	51.94	Dec. 15	53.70
Sep. 6	51.15	Apr. 9, 1947	51.85	Apr. 20, 1955	52.76
Oct. 11	51.08	Nov. 20	51.94	Dec. 20	53.20
Nov. 4	51.09	Apr. 8, 1948	51.96	Apr. 25, 1956	54.28
Dec. 6	51.05	Nov. 17	51.98	Jan. 17, 1957	53.24
Jan. 7, 1941	51.02	Apr. 28, 1949	51.98	Apr. 25	53.46
Feb. 9	51.00	Aug. 12	52.90	Dec. 17	53.50
Mar. 4	50.97	Nov. 7	52.37	Apr. 23, 1958	ab55.80
Apr. 8	50.97	Apr. 13, 1950	52.14	July 24	ab56.60
June 1	51.10	Nov. 8	52.68		
Aug. 1	51.15	Mar. 15, 1951	52.25		

a. Measurement by Geological Survey.

b. Pumping.

1N/9-26E1 (1N/9E-26F1). Bertha Loner, formerly Fahlberg, formerly Perron. Depth 133.7 ft. Altitude 1,897.4 ft.

Date	Water level	Date	Water level	Date	Water level
Feb. 2, 1940	116.46	Aug. 1, 1941	116.20	Nov. 15, 1951	116.28
Feb. 17	116.10	Oct. 1	116.18	Apr. 16, 1952	116.32
Apr. 1	116.09	Dec. 5	116.15	May 2,	a116.56
June 3	116.14	Apr. 20, 1942	116.17	Nov. 20	116.42
June 27	116.52	Aug. 1	116.75	May 26, 1953	116.50
Aug. 1	116.12	Jan. 29, 1946	116.77	Nov. 24	116.30
Oct. 11	116.12	Apr. 16	116.44	May 21, 1954	116.50
Nov. 4	116.12	Apr. 9, 1947	116.53	Dec. 14	117.60
Dec. 6	116.15	Apr. 13, 1950	116.17	Apr. 25, 1956	118.68
Jan. 7, 1941	116.15	Nov. 8	116.17	Jan. 17, 1957	116.90
Apr. 8	116.16	Mar. 15, 1951	116.08	Apr. 25	117.15

1N/9-26N1 (1N/9E-26-3a). Lawrence Jacobs. Depth about 162 ft. Altitude 1,933.7 ft.

Dec. 6, 1939	145.21	Aug. 1, 1941	145.40	Apr. 11, 1950	146.39
Jan. 16, 1940	145.24	Oct. 1	145.45	Nov. 7	146.58
Feb. 2	145.26	Dec. 15	145.48	Mar. 14, 1951	146.46
Feb. 17	145.26	Feb. 6, 1942	145.50	Nov. 14	146.56
Apr. 1	145.24	Apr. 20	145.48	Apr. 15, 1952	146.95
May 3	145.25	Aug. 1	145.54	May 7	a149.53
June 3	145.26	Oct. 15	145.59	Nov. 20	146.60
June 27	145.28	Jan. 29, 1946	145.98	May 25, 1953	146.80
Aug. 1	145.28	Apr. 10	145.99	Nov. 24	148.20
Sep. 6	145.31	Nov. 7	146.00	Apr. 21, 1954	147.30
Oct. 11	145.31	Apr. 8, 1947	146.05	Dec. 14	147.30
Nov. 4	145.31	Nov. 17	146.10	Apr. 20, 1955	148.30
Dec. 6	145.34	Apr. 7, 1948	146.12	Dec. 20	146.85
Jan. 7, 1941	145.34	Nov. 15	146.16	Apr. 25, 1956	152.05
Feb. 9	145.35	Jan. 3, 1949	146.19	Jan. 17, 1957	150.78
Mar. 4	145.37	Apr. 27	146.20	Apr. 24	149.09
Apr. 8	145.40	Aug. 12	146.31	Apr. 24, 1958	a157.40
June 1	147.39	Nov. 16	146.30		

a. Measurement by Geological Survey.

1N/9-27C1 (1N/9E-27-2b). A. Wrubel, formerly Campbell (east well). Depth about 145 ft. Altitude 1,868.0 ft.

Date	Water level	Date	Water level	Date	Water level
Feb. 2, 1940	81.63	Dec. 15, 1941	80.80	Mar. 15, 1951	83.59
Feb. 17	81.64	Feb. 16, 1942	80.97	Nov. 15	83.76
Apr. 1	81.81	Apr. 20	81.38	Apr. 16, 1952	83.63
May 3	81.90	Aug. 1	80.98	May 2	a81.66
June 3	82.00	Oct. 15	80.15	Nov. 24	83.30
June 27	82.02	Apr. 10, 1946	82.00	May 26, 1953	83.95
Aug. 1	82.04	Nov. 8	82.35	Nov. 27	83.80
Oct. 11	81.93	Apr. 9, 1947	82.61	Apr. 21, 1954	83.20
Nov. 4	81.90	Nov. 18	82.85	Dec. 14	86.50
Jan. 7, 1941	81.96	Apr. 8, 1948	84.54	Apr. 20, 1955	83.76
Feb. 9	81.83	Nov. 17	83.12	Apr. 25, 1956	84.05
Mar. 4	81.86	Apr. 28, 1949	83.15	Jan. 17, 1957	85.85
Apr. 8	81.91	Aug. 12	83.44	Apr. 24	84.00
June 1	82.01	Nov. 17	83.60	Dec. 17	83.95
Aug. 1	81.71	Apr. 13, 1950	83.67	Apr. 25, 1958	a83.65
Oct. 1	81.04	Nov. 8	83.47	July 24	a85.97

1N/9-27C2. A. Wrubel, formerly Campbell north well. Depth about 350 ft. Altitude 1,862.5 ft.

Feb. 2, 1940	76.89	Nov. 17, 1948	77.90	Dec. 14, 1954	84.00
Feb. 17	76.92	Apr. 13, 1950	78.27	Apr. 20, 1955	78.21
Apr. 1	76.99	Nov. 8	78.43	Dec. 20	78.60
May 3	77.02	Mar. 15, 1951	78.30	Apr. 25, 1956	80.67
June 3	b96.10	Nov. 15	78.38	Jan. 17, 1957	78.53
Aug. 1	77.15	Apr. 16, 1952	77.48	Apr. 25	78.56
Apr. 10, 1946	78.25	Nov. 24	78.80	Dec. 17	78.61
Apr. 9, 1947	77.77	May 26, 1953	81.96	Apr. 24, 1958	a79.06
Nov. 18	77.88	Nov. 27	78.60	July 24	a87.00
Apr. 8, 1948	77.74				

1N/9-27D1 (1N/9E-27-2c). Twentynine Palms Grammar School. Depth about 120 ft. Altitude 1,865.9 ft.

Feb. 20, 1940	81.39	Nov. 18, 1947	82.21	Aug. 12, 1949	82.75
Apr. 11, 1946	82.15	Apr. 8, 1948	82.19	Nov. 17	capped
Nov. 8	82.18	Nov. 17	82.30		
Apr. 9, 1947	82.15	Apr. 28, 1949	82.52		

a. Measurement by Geological Survey.

b. Pumping.

1N/9-27K1 (1N/9E-27L1). T. J. Hopkins, formerly Garwood. Depth about 165 ft. Altitude about 1,900 ft.

Date	Water level	Date	Water level	Date	Water level
Mar. 12, 1942	111.92	Aug. 12, 1949	114.16	May 26, 1953	109.12
Apr. 10, 1946	112.60	Apr. 13, 1950	113.14	Nov. 28	120.92
Nov. 14	112.51	Nov. 8	113.08	Apr. 21, 1954	122.32
Apr. 9, 1947	112.45	Mar. 15, 1951	119.39	Dec. 15	127.82
Nov. 18	112.44	Nov. 15	114.52	Apr. 20, 1955	130.02
Apr. 8, 1948	112.47	Apr. 16, 1952	114.57	Jan. 17, 1957	112.92
Nov. 17	112.56	May 2	all17.91	Dec. 17	113.14
Apr. 28, 1949	119.29	Nov. 20	109.22	July 24, 1958	ab118.52

1N/9-27M1. H. W. Mills, formerly Landon. Depth about 300 ft. Altitude about 1,900 ft.

Apr. 13, 1950	115.6	Aug. 6, 1952	all14.12	Apr. 24, 1956	114.50
Nov. 8	114.32	Nov. 20	114.20	Jan. 17, 1957	115.10
Mar. 15, 1951	114.24	May 26, 1953	114.40	Apr. 25	115.05
Nov. 15	113.95	Apr. 11	115.30	Dec. 17	115.10
Apr. 16, 1952	114.23	Apr. 21, 1954	115.40	Apr. 24, 1958	all14.98
May 7,	all13.89	Dec. 14	117.00	July 24	all17.68
May 28	all14.02	Apr. 20, 1955	115.10		
July 9	all14.08	Dec. 20	114.15		

1N/9-28B1 (1N/9E-28-1a). Matherly, formerly Spell. Depth 180.6 ft. Altitude 1,948.7 ft.

Feb. 2, 1940	169.84	Apr. 8, 1948	176.45	Mar. 15, 1951	171.35
Feb. 17	169.91	Nov. 17	170.81	Nov. 15	171.47
Apr. 10, 1946	170.55	Apr. 28, 1949	170.85	Apr. 16, 1952	171.28
Nov. 8	170.72	Nov. 17	170.04	May 1	all171.04
Apr. 9, 1947	170.74	Apr. 12, 1950	170.84	Nov. 20	178.4
Nov. 18	170.42	Nov. 8	170.98		

1N/9-28D1 (1N/9E-28-2a). Stephens. Altitude 2,008.0 ft.

Feb. 2, 1940	229.42	Nov. 8, 1946	230.87	Apr. 6, 1948	231.07
Feb. 17	230.05	Apr. 9, 1947	230.60	Nov. 17	231.02
Apr. 10, 1946	231.01	Nov. 18	230.85	Apr. 28, 1949	well destroyed

- a. Measurement by Geological Survey.
- b. Pumping.

1N/9-28R1 (1N/9E-28-4a). Fett. Altitude 1,920.6 ft.

Date	Water level	Date	Water level	Date	Water level
May 30, 1940	41.36	Aug. 1, 1940	41.65	Nov. 4, 1940	41.39
June 3	41.62	Sep. 6	41.62	Dec. 6	41.12 _a
June 27	41.03	Oct. 11	41.55	May 2, 1952	dry

1N/9-29F1 (1N/9E-29B1, 1N/9E-29-2a). McCutcheon, formerly Maude Rae. Depth about 380 ft. Altitude 2,079.4 ft.

Mar. 22, 1940	296.41	Apr. 27, 1949	304.25	Apr. 21, 1954	304.30
Apr. 8, 1941	296.75	Nov. 17	296.91	Dec. 14	297.40
Apr. 16, 1946	297.36	Apr. 12, 1950	299.23	Apr. 20, 1955	295.80
Nov. 8	305.40	Nov. 8	296.12	Dec. 20	312.1
Nov. 18, 1947	303.66	Nov. 26, 1952	a295.1	Apr. 25, 1956	295.2
Apr. 8, 1948	304.50	May 26, 1953	334.10	Jan. 17, 1957	294.1
Nov. 17	305.30	Nov. 24	324.30	Apr. 25	295.58

1N/9-29R1 (1N/9E-29-4a). Shell Service Station, formerly Twenty-nine Palms Utility Corp. Depth formerly about 121 ft. Altitude 1,991.1 ft.

Dec. 6, 1939	102.92	May 3, 1940	102.93	Oct. 1, 1941	103.00
Jan. 16, 1940	102.92	Aug. 1	102.94	Apr. 28, 1958	des-a/ troyed
Feb. 2	102.94	Mar. 4, 1941	103.02		
Apr. 1	102.93	Aug. 1	102.97		

1N/9-30Q1 (1N/9E-30-4a). Mathias Laufer, formerly Mission Inn (south well). Depth 143.5 ft. Altitude 2,091.6 ft.

Nov. 8, 1946	102.94	Mar. 14, 1951	101.94	Dec. 14, 1954	102.00
Apr. 8, 1947	103.01	Nov. 14	101.92	Apr. 20, 1955	102.00
Nov. 18	102.74	Apr. 15, 1952	101.92	Dec. 20	102.10
Apr. 8, 1948	104.30	Nov. 20	102.10	Apr. 25, 1956	102.15
Nov. 15	102.41	Dec. 4	a102.18	Jan. 17, 1957	102.42
Apr. 27, 1949	102.23	Feb. 18, 1953	a101.82	Apr. 25	102.40
Nov. 17	102.29	May 24	101.80	Dec. 17	102.64
Apr. 12, 1950	101.97	Nov. 24	103.50	Apr. 28, 1958	a102.84
Nov. 8	101.89	Apr. 21, 1954	101.90	July 23	a103.03

a. Measurement by Geological Survey.

1N/9-30Q2. Woodrow Mathews, formerly Nichollson. Altitude about 2,100 ft.

Date	Water level	Date	Water level	Date	Water level
Dec. 6, 1939	160.40	Nov. 15, 1948	141.68	Nov. 24, 1953	141.90
Jan. 16, 1940	170.38	Apr. 27, 1949	140.35	Apr. 21, 1954	141.60
Feb. 2	168.74	Nov. 17	140.22	Dec. 14	141.50
Feb. 17	162.12	Apr. 12, 1950	139.78	Apr. 20, 1955	138.80
Apr. 1	158.10	Nov. 8	139.29	Dec. 20	138.95
Apr. 10, 1946	153.63	Mar. 14, 1951	139.43	Apr. 25, 1956	139.00
Nov. 8	144.05	Nov. 14	139.13	Jan. 17, 1957	139.04
Apr. 8, 1947	142.80	Apr. 15, 1952	138.97	Apr. 25	139.00
Nov. 18	141.77	Nov. 20	138.60	Dec. 17	139.03
Apr. 8, 1948	141.47	May 26, 1953	139.05	Apr. 28, 1958	plugged ^{a/}

1N/9-31A1. Twentynine Palms County Water District, formerly Ruth Abel. Depth about 350 ft. Altitude about 2,095 ft.

July 23, 1953	h97.68	Jan. 25, 1956	h103.98	Apr. 25, 1957	97.33
Sep. 10	ab97.45	Feb. 5, 1957	c101.98		
Jan. 25, 1956	c99.48	Feb. 5	h107.48		

1N/9-31C1 (1N/9E-31-2a). Twentynine Palms County Water District. Depth about 306 ft. Altitude 2,102.3 ft.

Dec. 6, 1939	105.95	Jan. 7, 1941	106.37	Nov. 7, 1946	106.23
Jan. 16, 1940	106.22	Feb. 9	106.38	Apr. 8, 1947	106.42
Feb. 2	106.24	Mar. 4	106.37	Nov. 18	108.52
Apr. 1	106.26	Apr. 8	106.32	Nov. 17, 1949	103.12
June 3	106.29	June 1	106.29	Apr. 12, 1950	112.30
June 27	106.30	Aug. 1	106.28	Mar. 14, 1951	109.79
Aug. 1	106.30	Oct. 1	106.32	Dec. 20, 1955	119.45
Sep. 6	106.31	Dec. 15	106.37	Apr. 25, 1956	119.90
Oct. 11	106.34	Apr. 20, 1942	106.32	Jan. 17, 1957	114.83
Nov. 4	106.35	Aug. 1	106.45	Apr. 25	115.30
Dec. 6	106.37	Apr. 10, 1946	106.38		

1N/9-32F1. Mrs. Griffin. Altitude about 2,060 ft.

Apr. 10, 1946	64.04	Nov. 8, 1950	65.72	Dec. 14, 1954	77.70
Nov. 7	64.29	Mar. 14, 1951	65.87	Apr. 20, 1955	71.20
Apr. 8, 1947	64.25	Nov. 14	66.00	Dec. 20	69.95
Nov. 18	64.66	Apr. 15, 1952	66.03	Apr. 25, 1956	68.93
Apr. 8, 1948	64.68	Nov. 20	66.6	Jan. 17, 1957	69.22
Nov. 15	65.17	Nov. 26	a66.35	Apr. 25	69.33
Apr. 27, 1949	65.13	May 26, 1953	67.80	Dec. 17	68.63
Nov. 17	66.00	Nov. 24	68.70	Apr. 29, 1958	a69.71
Apr. 12, 1950	65.68	Apr. 21, 1954	74.0	July 23	a70.13

a. Measurement by Geological Survey

b. Pumping.

c. Measurement by owner.

h. Measurement by Calif. Electric Power Co.

1N/9-32G1. Hilda Peterson. Depth about 68 ft. Altitude about 2,020 ft.

Date	Water level	Date	Water level	Date	Water level
Apr. 10, 1946	40.90	Nov. 8, 1950	42.47	Apr. 20, 1955	44.76
Nov. 7	40.70	Mar. 14, 1951	42.55	Dec. 20	45.43
Apr. 8, 1947	41.14	Nov. 14	42.79	Apr. 25, 1956	45.37
Nov. 18	41.39	Apr. 15, 1952	42.83	Jan. 17, 1957	45.83
Apr. 8, 1948	41.51	Nov. 20	42.70	Apr. 25	45.84
Nov. 15	41.86	Dec. 3	a43.10	Dec. 17	45.96
Jan. 3, 1949	41.91	May 26, 1953	43.37	Apr. 29, 1958	a46.04
Apr. 27	42.90	Nov. 24	43.50	July 23	a47.57
Nov. 17	42.29	Apr. 21, 1954	44.30		
Apr. 12, 1950	42.27	Dec. 14	44.40		

1N/9-32H2 (1N/9E-32H1). N. S. Hughes (Sunland Auto Court), formerly DeFord. Depth about 125 ft. Altitude about 1,995 ft.

Apr. 16, 1946	103.61	Apr. 17, 1950	103.12	Apr. 20, 1955	102.35
Nov. 7	94.33	Nov. 7	102.80	Dec. 20	102.15
Apr. 8, 1947	103.31	Mar. 14, 1951	102.87	Apr. 25, 1956	102.15
Nov. 18	102.53	Nov. 14	102.85	Jan. 17, 1957	101.98
Apr. 8, 1948	103.23	Apr. 15, 1952	102.68	Apr. 25	101.99
Nov. 16	103.38	Nov. 26	a102.70	Dec. 17	101.91
Apr. 27, 1949	102.96	May 26, 1953	102.61	Apr. 30, 1958	a101.75
Nov. 17	102.17	Nov. 24	108.23	July 23	a101.89

1N/9-32H3 (1N/9E-32-1b). Enid Ribel, formerly Sullivan. Depth about 35 ft. Altitude 2,005.4 ft.

Feb. 2, 1946	15.80	Oct. 11, 1946	15.94	Dec. 15, 1947	15.91
Feb. 17	15.82	Nov. 4	15.93	Feb. 16, 1952	15.93
Apr. 1	15.81	Jan. 7, 1947	15.89	Apr. 20	16.00
May 3	15.87	Feb. 9	15.90	Aug. 1	16.32
June 3	15.91	Mar. 4	15.89	Oct. 15	16.20
June 27	15.93	June 1	15.93	Apr. 29, 1958	dry ^a
Aug. 1	15.94	Aug. 1	15.99		
Sep. 6	15.94	Oct. 1	15.98		

a. Measurement by Geological Survey.

1N/9-32R1 (1N/9E-32J1, 1N/9E-32-4d). H. L. Earenfight. Depth about 75 ft. Altitude 2,045.7 ft.

Date	Water level	Date	Water level	Date	Water level
Jan. 16, 1940	56.40	Nov. 17, 1949	58.43	Dec. 14, 1954	62.20
Feb. 2	56.38	Apr. 11, 1950	58.51	Apr. 20, 1955	61.00
Feb. 17	56.36	Nov. 8	58.71	Dec. 20	62.52
Apr. 1	56.36	Mar. 14, 1951	59.04	Apr. 25, 1956	61.45
Apr. 10, 1946	57.18	Nov. 14	58.98	Jan. 17, 1957	61.89
Nov. 7	57.31	Apr. 15, 1952	59.10	Apr. 25	61.96
Apr. 8, 1947	57.35	May 9	ab59.24	Dec. 17	62.00
Nov. 18	57.62	Nov. 20	59.35	Apr. 29, 1958	ab62.14
Apr. 8, 1948	57.72	May 26, 1953	59.50	July 23	a62.70
Nov. 15	58.07	Nov. 24	62.50		
Apr. 27, 1949	58.13	Apr. 21, 1954	62.70		

1N/9-33J1 (1N/9E-33-1a, Twentynine Palms Spring). National Park Service (oasis spring). Depth about 16 ft. Altitude 1,961.4 ft.

Feb. 2, 1940	+0.34	Dec. 15, 1941	+0.21	Nov. 14, 1951	0.90
Feb. 17	+0.36	Feb. 16, 1942	+0.23	Apr. 15, 1952	.42
Apr. 1	+0.36	Apr. 20	+0.19	May 9	a .84
May 3	+0.26	Aug. 1	.62	Nov. 20	1.18
June 3	+0.26	Oct. 15	.63	May 25, 1953	.92
June 27	+0.01	Jan. 29, 1946	+0.20	Nov. 24	1.29
Aug. 1	.55	Apr. 10	+0.11	Apr. 21, 1954	.70
Sep. 6	.69	Nov. 7	.37	Dec. 14	1.00
Oct. 11	.42	Apr. 8, 1947	+0.07	Apr. 20, 1955	.75
Nov. 4	.20	Nov. 17	.38	Dec. 20	1.36
Dec. 6	+0.44	Apr. 6, 1948	+0.01	1956	1.39
Jan. 7, 1941	+0.10	Nov. 15	.54	Jan. 17, 1957	2.21
Feb. 9	+0.50	Jan. 3, 1949	.16	Apr. 24	2.19
Mar. 4	+0.23	Apr. 27	.20	Dec. 17	2.54
Apr. 8	+0.30	Nov. 16	.62	Apr. 29, 1958	a2.52
June 1	.09	Apr. 11, 1950	.24	July 23	a4.11
Aug. 1	+0.42	Nov. 7	.91		
Oct. 1	.90	Mar. 14, 1951	.15		

a. Measurement by Geological Survey.

b. Pumping.

1N/9-34A1 (1N/9E-34-1a). Clara Hine, formerly Nelson, formerly Keaton. Altitude about 1,935 ft.

Date	Water level	Date	Water level	Date	Water level
June 3, 1940	151.17	Nov. 15, 1948	151.15	May 25, 1953	153.68
June 27	151.14	Apr. 27, 1949	152.51	Nov. 24	158.38
Aug. 1	151.16	Aug. 12	151.69	Apr. 21, 1954	156.70
Oct. 11	151.16	Nov. 16	151.81	Dec. 14	160.00
Nov. 4	151.14	Apr. 11, 1950	153.28	Apr. 20, 1955	156.90
Dec. 6	150.90	Nov. 7	154.32	Dec. 20	153.65
Apr. 10, 1946	151.32	Mar. 14, 1951	154.21	Apr. 25, 1956	151.50
Nov. 7	150.88	Nov. 14	155.60	Jan. 17, 1957	151.78
Apr. 8, 1947	151.05	Apr. 15, 1952	153.87	Apr. 24	154.24
Nov. 18	152.12	May 7	a152.54	Apr. 30, 1958	a167.27
Apr. 7, 1948	150.98	Nov. 20	152.18		

1N/9-35F1 (1N/9E-35-2a). H. L. Watson. Depth about 253 ft. Altitude 1,971.0 ft.

Dec. 6, 1939	115.31	Nov. 16, 1949	122.79	Apr. 20, 1955	117.85
Jan. 16, 1940	121.80	Apr. 11, 1950	120.83	Dec. 20	117.35
Feb. 2	b 150.85	Nov. 7	b127.89	Apr. 4, 1956	117.00
Feb. 17	119.86	Apr. 15, 1952	b129.50	Jan. 17, 1957	116.98
Apr. 10, 1946	b175.17	May 9	ab130.54	Apr. 24	116.74
Nov. 6	120.60	May 25, 1953	b136.80	Apr. 30, 1958	a115.30
Apr. 8, 1947	127.93	Nov. 24	122.90	July 24	a114.75
Nov. 18	124.31	Apr. 21, 1954	b131.40		
Nov. 15, 1948	123.17	Dec. 14	118.50		

1N/9-35N1 (1N/9E-35-3a). Twentynine Palms County Water District. Depth 244.2 ft. Altitude 2,079.5 ft.

Jan. 16, 1940	99.59	Apr. 8, 1941	99.65	Jan. 3, 1949	102.95
Feb. 2	99.28	June 1	99.65	Apr. 27	102.07
Feb. 17	99.58	Aug. 1	99.67	Nov. 17	102.97
Apr. 1	99.58	Oct. 1	99.70	Apr. 11, 1950	102.25
May 3	99.58	Dec. 5	99.67	Nov. 7	102.24
June 3	99.59	Feb. 16, 1942	99.68	Mar. 14, 1951	102.30
June 27	99.60	Apr. 20	99.67	Nov. 14	102.47
Aug. 1	99.60	Aug. 1	99.70	Apr. 15, 1952	102.50
Sep. 6	99.64	Oct. 15	99.74	May 9	a102.44
Oct. 11	99.65	Jan. 29, 1946	99.98	Nov. 20	102.59
Nov. 4	99.66	Apr. 10	99.95	Apr. 20, 1955	103.40
Dec. 6	99.67	Nov. 7	100.09	Jan. 25, 1956	102.00
Jan. 7, 1941	99.65	Apr. 8, 1947	100.10	Feb. 5, 1957	c106.00
Feb. 9	99.66	Nov. 17	101.99	Feb. 5	h108.00
Mar. 4	99.66	Nov. 15, 1948	102.05		

- a. Measurement by Geological Survey.
- b. Pumping.
- h. Measurement by Calif. Electric Power Co.
- c. Measurement by owner.

2N/6-6D2. George Van Tassel, formerly Reche. Depth about 200 ft.
Altitude about 2,960 ft. Measurements by Geological Survey.

Date	Water level	Date	Water level	Date	Water level
Feb. 6, 1953	39.51	May 30, 1953	39.64	Nov. 22, 1953	f39.56
Feb. 25	e39.72	June 25	39.57	Feb. 13, 1954	39.75
Mar. 28	39.71	Aug. 7	39.51	June 23	39.50
Apr. 29	39.72	Sep. 10	39.58	May 28, 1958	b42.65

2N/8-26J1 (2N/8E-26K1). C. R. Cheney, formerly Stubbs. Depth about 185 ft. Altitude about 1,950 ft.

Apr. 12, 1946	154.97	Aug. 8, 1953	a155.47	Dec. 22, 1955	156.45
Nov. 14	155.06	Sep. 9	a155.49	Apr. 26, 1956	157.00
Apr. 10, 1947	155.00	Nov. 30	155.50	Jan. 18, 1957	155.55
Nov. 21	155.16	Dec. 23	a155.49	Feb. 7	a156.05
Apr. 8, 1948	155.18	Mar. 3, 1954	a155.51	Mar. 5	a156.65
Nov. 18	155.17	Mar. 31	a155.51	Apr. 3	a156.14
Apr. 28, 1949	155.20	May 5	a155.49	Apr. 26	156.15
Nov. 18	155.29	June 24	a155.54	May 7	a156.17
Apr. 14, 1950	155.31	July 23	a155.55	June 6	a156.14
Nov. 9	155.39	Aug. 24	a155.57	Aug. 6	a156.17
Mar. 15, 1951	155.29	Sep. 24	a155.55	Sep. 9	a156.17
Nov. 15	155.32	Nov. 20	a155.60	Oct. 7	a156.23
Apr. 16, 1952	155.37	Jan. 21, 1955	a155.57	Nov. 7	a156.27
Apr. 27	a155.37	Feb. 22	a155.56	Dec. 9	a156.17
May 28	a155.41	Mar. 16	a155.62	Dec. 18	156.62
July 7	a155.39	Apr. 16	a155.63	Jan. 10, 1958	a156.19
Aug. 6	a155.39	Apr. 21	155.55	Feb. 10	a157.57
Oct. 4	a155.39	May 19	a155.75	Apr. 16	a158.68
Jan. 26, 1953	a156.10	July 21	a155.61	May 9	a157.31
Feb. 18	a155.45	Aug. 24	a156.07	May 14	a156.25
Apr. 30	a155.48	Sep. 23	a155.77	June 14	a156.26
May 29	a155.45	Oct. 17	a155.64	July 14	a156.48
July 10	a155.46	Nov. 23	a155.61	Aug. 12	a156.28

2N/9-19N1 (2N/9E-19N2, 2N/9E-19-3a). Strickler west well. Depth 78.0 ft. Altitude 1,834.0 ft.

June 3, 1940	69.00	Oct. 1, 1941	69.39	Apr. 28, 1949	68.66
June 27	69.11	Dec. 15	69.04	Nov. 18	69.02
Aug. 1	69.18	Feb. 16, 1942	69.25	Apr. 14, 1950	68.84
Sep. 6	69.24	Apr. 20	69.11	Nov. 9	69.02
Oct. 11	69.28	Aug. 1	69.31	Mar. 15, 1951	68.98
Nov. 4	69.26	Oct. 15	69.47	Nov. 15	69.16
Dec. 6	69.30	Apr. 11, 1946	68.48	Apr. 16, 1952	69.08
Jan. 7, 1941	69.29	Nov. 14	68.70	Apr. 27	a68.90
Feb. 9	69.22	Apr. 10, 1947	68.62	Nov. 25	69.90
Mar. 4	69.24	Nov. 21	68.83	May 27, 1953	69.26
Apr. 8	69.18	Apr. 8, 1948	68.58	Nov. 30	72.66
June 1	69.15	Nov. 18	68.94	Apr. 22, 1954	70.36
Aug. 1	69.30	Jan. 3, 1949	68.94	Dec. 15	69.13

a. Measurement by Geological Survey.
e. Recorder installed.
f. Recorder removed.

Continued
b. Pumping.

2N/9-19N1.--Continued

Date	Water level	Date	Water level	Date	Water level
Apr. 21, 1955	69.25	Jan. 18, 1957	69.98	May 20, 1958	a69.25
Dec. 22	69.16	Apr. 26	69.32	July 23	a70.44
Apr. 26, 1956	69.26	Dec. 18	69.66		

2N/9-19N2 (2N/9-19N1). Strickler. Altitude 1,824.0 ft.

June 3, 1940	59.50	Apr. 14, 1950	60.85	Nov. 27, 1953	62.65
Apr. 11, 1946	60.40	Nov. 9	61.28	Apr. 22, 1954	63.94
Nov. 21, 1947	60.92	Mar. 15, 1951	60.85	Dec. 15	63.66
Apr. 8, 1948	60.70	Nov. 15	61.30	Apr. 21, 1955	63.36
Nov. 18	61.05	Apr. 16, 1952	61.03	Dec. 22	63.55
Apr. 28, 1949	60.73	Apr. 27	a60.78	Apr. 26, 1956	62.30
Nov. 18	61.25	May 27, 1953	63.60	Jan. 18, 1957	61.20

2N/9-29N1 (2N/9E-32-2a). Hinshaw, formerly Pfeifer. Depth 8.5 ft. Altitude about 1,750 ft.

Apr. 11, 1946	6.48	Apr. 8, 1948	7.01	Nov. 18, 1949	8.07
Nov. 13	8.02	Nov. 17	8.62	Apr. 14, 1950	7.34
Apr. 10, 1947	7.00	Jan. 3, 1949	8.45	Nov. 8	filled
Nov. 21	8.31	Apr. 28	6.88		

2N/9-30A2 (2N/9E-30A1). Donald Fisher, formerly Nichols. Depth about 40 ft. Altitude about 1,770 ft.

Apr. 11, 1946	1.90	Nov. 15, 1951	1.95	Apr. 21, 1955	flowing
Nov. 14	1.96	Apr. 16, 1952	flowing ^a	Dec. 22	flowing
Apr. 10, 1947	flowing	Apr. 26	flowing ^a	Apr. 26, 1956	flowing
Nov. 21	flowing	Nov. 25	flowing	Apr. 26	flowing
Apr. 6, 1948	flowing	May 27, 1953	flowing	Dec. 18	flowing
Nov. 18	flowing	Nov. 27	flowing	May 6, 1958	flowing ^a
Apr. 28, 1949	flowing	Apr. 22, 1954	flowing	July 23	flowing ^a
Apr. 14, 1950	flowing	Dec. 15	flowing		

a. Measurement by Geological Survey.

2N/9-30P2. Emery Ball, formerly Camp. Depth 58.5 ft. Altitude about 1,790 ft. Measurements by Geological Survey.

Date	Water level	Date	Water level	Date	Water level
Apr. 27, 1952	27.38	Nov. 20, 1954	28.30	Dec. 3, 1956	28.40
May 28	27.52	Dec. 22	28.11	Jan. 9, 1957	28.21
July 7	27.82	Jan. 21, 1955	27.93	Feb. 7	28.04
Aug. 6	27.99	Feb. 22	27.76	Mar. 5	27.90
Oct. 4	28.17	Mar. 16	27.68	Apr. 3	27.84
Jan. 26, 1953	27.61	Apr. 16	27.59	May 7	27.84
Feb. 18	27.52	May 19	27.61	June 6	28.03
Mar. 27	27.40	June 17	27.87	July 5	28.24
Apr. 30	27.36	July 21	28.16	Aug. 6	28.49
May 29	27.49	Aug. 24	28.34	Sep. 9	28.65
July 10	27.61	Sep. 23	28.48	Oct. 7	28.68
Aug. 8	28.01	Oct. 17	28.50	Nov. 7	28.51
Sep. 9	28.20	Nov. 22	28.43	Dec. 9	28.32
Nov. 22	28.14	Dec. 21	28.25	Jan. 10, 1958	28.12
Dec. 23	27.95	Jan. 23, 1956	28.07	Feb. 10	27.98
Mar. 4, 1954	27.60	Apr. 4	27.79	Mar. 11	27.88
Mar. 31	27.53	May 1	27.77	Apr. 16	27.79
May 5	27.53	June 5	28.02	May 14	27.76
June 24	27.94	July 2	28.24	May 16	27.76
July 23	28.13	Aug. 3	28.47	June 14	27.89
Aug. 24	28.32	Sep. 5	28.63	July 14	28.13
Sep. 24	28.39	Oct. 4	28.66		
Oct. 21	28.42	Nov. 6	28.57		

2N/9-31C1. L. R. Christopher, formerly Meyer (east well). Altitude 1,782.8 ft.

Dec. 6, 1939	17.32	Apr. 10, 1947	15.85	Nov. 30, 1953	17.05
May 3, 1940	16.21	Nov. 21	16.34	Apr. 22, 1954	16.10
June 3	17.05	Apr. 8, 1948	15.61	Dec. 15	18.51
June 27	16.44	Nov. 18	16.25	Apr. 21, 1955	17.41
Aug. 1	17.22	Apr. 28, 1949	15.83	Dec. 22	16.95
Sep. 6	15.72	Nov. 18	16.76	Apr. 27, 1956	16.44
Nov. 4	17.95	Apr. 14, 1950	15.85	Jan. 18, 1957	17.70
Dec. 6	17.59	Nov. 9	16.86	Apr. 26	17.54
Jan. 7, 1941	17.32	Mar. 15, 1951	15.84	Dec. 18	16.87
Feb. 9	17.07	Nov. 15	16.55	May 16, 1958	16.15
Mar. 4	15.83	Apr. 16, 1952	16.41		
Apr. 12, 1946	15.97	May 27, 1953	17.95		

a. Measurement by Geological Survey

2N/9-31E1. L. R. Christopher, formerly Meyer west well. Depth about 68 ft. Altitude 1,830.0 ft.

Date	Water level	Date	Water level	Date	Water level
Dec. 6, 1939	59.47	Nov. 4, 1940	59.81	Apr. 12, 1946	59.70
Feb. 2, 1940	59.29	Dec. 6	58.78	Apr. 10, 1947	59.65
Feb. 17	59.19	Feb. 9, 1941	59.32	Apr. 8, 1948	60.59
Apr. 1	59.08	Apr. 8	59.18	Nov. 18, 1949	58.74
Aug. 1	59.58	Dec. 15	59.06		
Oct. 11	59.72	Apr. 20, 1942	59.37		

2N/9-31J1. Mesquite Spring. Altitude about 1,765 ft.

1917	flowing ^{a/}	Nov. 13, 1946	1.89	May 27, 1953	.70
Apr. 1, 1940	1.64	Apr. 11, 1947	2.22	Nov. 27	.75
Apr. 24	1.68	Nov. 20	2.32	Apr. 22, 1954	1.20
May 3	1.68	Apr. 6, 1948	1.80	Dec. 15	1.00
June 3	1.84	Nov. 17	2.30	Apr. 21, 1955	.89
June 27	2.45	Jan. 3, 1949	1.86	Dec. 22	0
Aug. 1	3.40	Apr. 28	2.28	Apr. 26, 1956	1.15
Sep. 6	3.70	Nov. 17	2.35	Jan. 18, 1957	2.33
Nov. 4	2.65	Apr. 14, 1950	1.87	Apr. 26	2.45
Dec. 6	2.15	Mar. 15, 1951	1.81	Dec. 18	2.43
Jan. 7, 1941	2.02	Nov. 15	2.05	May 20, 1958	a3.80
Feb. 9	1.99	Apr. 16, 1952	1.98	July 23	a4.90
Apr. 11, 1946	2.17	Nov. 25	1.25		

2N/9-31M1 (2N/9E-31-3a). Johnson. Altitude 1,836.9 ft.

Mar. 14, 1941	59.11	Apr. 10, 1947	60.38	Nov. 18, 1948	obstruction at 60 ft
Apr. 12, 1946	60.32	Nov. 21	60.53		
Nov. 14	60.48	Apr. 8, 1948	60.53		

2N/9-31R1. H. C. Brown. Depth 26.0 ft. Altitude about 1,765.1 ft.

Apr. 29, 1952	a16.04	Dec. 18, 1957	18.00	July 23, 1958	a17.77
Apr. 26, 1957	16.67	May 20, 1958	a16.45		

2N/9-32M1. Owner unknown. Depth formerly 15.6 ft. Altitude about 1,760 ft. Measurements by Geological Survey.

Apr. 29, 1952	6.25	Aug. 6, 1952	8.46	Nov. 20, 1954	completely caved in
May 28	7.09	Nov. 22, 1953	9.31		
July 9	7.98	Apr. 1, 1954	6.64		

a. Measurement by Geological Survey.

1S/5-2A1 (1S/5E-2-1a). Clayton Hoyt, formerly Barrett. Depth about 280 ft. Altitude about 3,285 ft.

Date	Water level	Date	Water level	Date	Water level
Apr. 15, 1947	171.87	Apr. 10, 1950	175.40	Apr. 19, 1955	181.10
Nov. 13	172.65	Mar. 12, 1951	176.21	Dec. 19	181.85
Apr. 5, 1948	173.13	Nov. 12	176.96	Jan. 16, 1957	183.25
Nov. 15, 1949	175.35	Apr. 14, 1952	177.66	June 3, 1958 a	185.19

1S/5-2B1. Charles Butterbaugh. Depth about 240 ft. Altitude about 3,240 ft.

Apr. 15, 1947	161.90	Nov. 6, 1950	164.96	Apr. 20, 1954	171.00
Nov. 13	161.18	Mar. 12, 1951	165.38	Dec. 13	172.70
Apr. 5, 1948	161.83	Nov. 12	166.00	Apr. 19, 1955	170.20
Nov. 16	162.54	Apr. 14, 1952	165.88	Dec. 19	171.05
Apr. 27, 1949	163.12	Nov. 18	167.76	Apr. 24, 1956	171.43
Nov. 15	163.86	May 22, 1953	167.90	Jan. 16, 1957	172.37
Apr. 10, 1950	164.29	Nov. 23	170.40	Apr. 23	172.70

1S/5-2C1. J. F. Davenport. Depth about 252 ft. Altitude about 3,310 ft.

Apr. 15, 1947	192.36	Apr. 10, 1950	195.45	Dec. 13, 1954	202.11
Nov. 13	191.92	Nov. 6	196.15	Apr. 19, 1955	202.61
Apr. 5, 1948	194.01	Mar. 12, 1951	196.62	Dec. 19	202.56
Nov. 16	193.77	Nov. 12	197.39	Apr. 24, 1956	201.91
Apr. 27, 1949	194.35	Apr. 14, 1952	198.13	Jan. 16, 1957	203.71
Nov. 15	195.04	Apr. 20, 1954	200.41	Apr. 23	204.27

1S/5-2C2. Albert Vogel, formerly Henderson. Depth about 250 ft. Altitude about 3,305 ft.

Apr. 15, 1947	188.14	Mar. 12, 1951	191.79	Dec. 19, 1955	197.80
Nov. 13	188.34	Nov. 12	192.48	Apr. 24, 1956	198.10
Apr. 5, 1948	188.56	Apr. 14, 1952	192.73	Jan. 16, 1957	197.40
Nov. 16	187.72	May 22, 1953	193.80	Jan. 16	197.35
Apr. 27, 1949	189.80	Nov. 23	196.20	Apr. 23	199.28
Nov. 15	190.36	Jan. 20, 1954	195.6	May 14, 1958 a	199.00
Apr. 10, 1950	190.90	May 13	196.40	July 22	a196.62
Nov. 6	191.40	Apr. 19, 1955	200.60		

a. Measurement by Geological Survey.

1S/5-3B1 (1S/5E-3F1). Yucca Valley Water Co. Depth about 400 ft.
Altitude about 3,325 ft.

Date	Water level	Date	Water level	Date	Water level
Apr. 15, 1946	198.10	Nov. 4, 1950	209.21	Apr. 19, 1955	209.10
Nov. 16	198.44	Mar. 12, 1951	209.29	Dec. 19	210.20
Apr. 15, 1947	198.97	Nov. 12	214.28	Apr. 24, 1956	210.70
Nov. 13	200.35	May 26, 1952	213.10	Jan. 16, 1957	211.11
Apr. 5, 1948	202.44	Nov. 17	218.50	Apr. 23	212.73
Nov. 16	199.48	May 22, 1953	211.48	Feb. 25, 1958	a225.85
Apr. 27, 1949	201.15	Nov. 23	229.08	July 23	a216.77
Nov. 14	201.75	Apr. 20, 1954	225.00		
Apr. 10, 1950	202.70	Dec. 13	230.30		

1S/5-4R2 (1S/5E-4-4a). F. Batters. Depth about 100 ft. Altitude about 3,520 ft.

Apr. 15, 1947	34.33	Nov. 12, 1951	43.33	Apr. 19, 1955	48.20
Nov. 13	39.19	Nov. 17, 1952	45.80	Apr. 27, 1956	49.60
Nov. 17, 1948	39.26	Nov. 23, 1953	45.70	Jan. 16, 1957	50.93
Nov. 15, 1949	39.95	Apr. 20, 1954	46.50	Apr. 23	51.25
Nov. 6, 1950	41.97	Dec. 13	46.50	May 8, 1958	53.35

1S/9-2B1. O. J. Booth. Depth about 108 ft. Altitude about 2,060 ft.

Apr. 16, 1946	92.95	Apr. 8, 1948	94.42	Apr. 11, 1950	93.81
Nov. 7	92.95	Nov. 15	93.14	Nov. 20, 1952	93.09
Apr. 8, 1947	92.98	Apr. 27, 1949	93.18	Apr. 21, 1954	102.11
Nov. 17	92.95	Nov. 17	93.21		

1S/9-3D1 (1S/9E-3-2a). Twentynine Palms County Water District, formerly Hanson. Depth about 300 ft. Altitude 2,076.6 ft.

Dec. 6, 1939	86.48	Mar. 4, 1941	86.61	Apr. 27, 1949	88.76
Jan. 16, 1940	86.52	Apr. 8	86.61	Nov. 17	89.12
Feb. 2	86.53	June 1	86.63	Apr. 11, 1950	92.86
Feb. 17	86.52	Aug. 1	86.67	Nov. 7	94.46
Apr. 1	86.55	Oct. 1	86.69	Mar. 14, 1951	89.30
May 3	86.54	Dec. 15	86.65	Nov. 14	93.07
June 3	86.57	Feb. 16, 1942	86.68	Nov. 20, 1952	90.00
June 27	86.61	Aug. 1	86.73	May 26, 1953	91.70
Aug. 1	86.59	Oct. 15	86.77	Nov. 24	b93.50
Sep. 6	86.64	Apr. 16, 1946	d88.70	Apr. 21, 1954	98.8
Oct. 11	86.63	Nov. 7	87.78	Dec. 14	94.70
Nov. 4	86.63	Apr. 11, 1947	87.81	Dec. 20, 1955	92.85
Dec. 6	86.65	Nov. 17	88.45	Feb. 5, 1957	bh102.00
Jan. 7, 1941	86.62	Apr. 6, 1948	88.98	Apr. 24	92.45
Feb. 9	86.61	Nov. 15	88.67	Dec. 17	92.65

a. Measurement by Geological Survey.

b. Pumping.

d. Pumped recently.

h. Measurement by California Electric Power Co.

1S/9-5A1 (1S/9E-5-1a). Goodale, formerly Beech. Altitude 2,063.4 ft.

Date	Water level	Date	Water level	Date	Water level
Feb. 2, 1940	74.06	Nov. 15, 1948	75.95	Apr. 15, 1952	77.32
Apr. 10, 1946	75.04	Apr. 27, 1949	76.00	May 9	a78.93
Nov. 7	75.90	Nov. 17	76.4	Nov. 20	77.20
Apr. 8, 1947	75.42	Apr. 12, 1950	74.8	May 26, 1953	77.10
Nov. 18	75.52	Nov. 8	75.27	Nov. 24	81.70
Apr. 8, 1948	75.53	Mar. 14, 1951	79.55		

- a. Measurement by Geological Survey.
- b. Pumping.
- c. Measurement by owner.
- d. Pumped recently.
- e. Recorder installed.
- f. Recorder removed.
- g. Nearby well being pumped.
- h. Measurement by California Electric Power Co.

Table 4.--Drillers' logs of water wells

Note: The term "hill formation" is used by some drillers in the Yucca Valley-Twentynine Palms area to describe various types of materials penetrated by wells that are believed by the drillers to be similar to materials exposed in nearby hills.

1N/5-12D1. O. B. Harrod. Altitude about 3,620 ft. Drilled by C.K.S. Drilling Co. in 1956. 8-inch casing, perforated 220-240 and 260-300 ft.

	Thickness (feet)	Depth (feet)
Topsoil -----	10	10
Sand and gravel -----	58	68
Sand, coarse; gravel -----	2	70
Decomposed granite -----	50	120
Quartz, white; black shale -----	6	126
Decomposed granite and white clay -----	8	134
Gravel, coarse; black rock -----	1	135
Decomposed granite and black rock -----	38	173
Lava rock -----	4	177
Decomposed granite and rock -----	43	220
Gravel, coarse; clay -----	64	284
Rock, coarse -----	3	287
Gravel, coarse -----	13	300

1N/5-14A1. C. L. Gleason. Altitude about 3,690 ft. Drilled by C. H. Suffdy in 1957. 8-inch casing removed.

Sand and clay -----	73	73
Sand; clay; boulders -----	90	163
"Hard shelf" -----	5	168
Clay; boulders -----	55	223
Boulders, extremely hard -----	4	227
Clay -----	8	235
Sand, gravel, and clay -----	47	282
Lava, sand, and gravel -----	28	310
Clay and boulders; no water -----	132	442

1N/5-14N3. Frank Richards. Altitude about 3,860 ft. Drilled by C. H. Suffdy and Earl Ramey in 1958. 6-inch casing, perforated 200-302 ft.

	Thickness (feet)	Depth (feet)
Clay, red, hard -----	17	17
Clay, brown, sandy -----	218	235
Decomposed granite, firm -----	67	302
Granite, blue, very hard -----	14	316
Stone, porous; with water -----	9	325

1N/5-19R1. W. D. Bridge. Altitude about 4,100 ft. Drilled by C. H. Suffdy and Earl Ramey in 1957. 12-inch casing, perforated 140-310 ft.

Not logged -----	75	75
Decomposed granite -----	135	210
Granite, gray, hard -----	16	226
Sandstone, porous; water -----	9	235
Granite gray, hard -----	55	290
Sandstone, porous; water -----	15	305
Clay, white, tough -----	5	310

1N/5-20N1. Russell Hayden. Altitude about 4,030 ft. Drilled by C. H. Suffdy in 1956. 10-inch casing, perforated 151-260 ft.

Topsoil -----	11	11
Decomposed, soft, (?) -----	99	110
Silt, fine; water -----	11	121
Decomposed, hard, (?) -----	36	157
Sand; water -----	5	162
Decomposed, hard, (?) -----	85	247
Sand, coarse; water -----	7	254
Decomposed, hard, (?) -----	6	260

1N/5-28P1. Rene' Mellete. Altitude about 3,630 ft. Drilled by C. H. Suffdy in 1957. 8-inch casing, perforated 125-225 ft.

"Wash" sand -----	40	40
Clay, brown, sandy -----	85	125
Silt, fine -----	5	130
Sand, coarse; water -----	10	140
Decomposed material -----	50	190
Sand, fine; water -----	2	192
Granite, blue, hard -----	22	214
Decomposed material, crumbly; water -----	2	216
Granite, blue -----	9	225

1N/5-33J1. O. L. Lasley. Altitude about 3,400 ft. Drilled by C. H. Suffdy in 1956. 8-inch casing, perforated 245-310 ft.

	Thickness (feet)	Depth (feet)
Sand, loose -----	16	16
Clay, sandy -----	38	54
Decomposed granite, soft -----	118	172
Clay, white, sandy -----	63	235
Limestone, white -----	5	240
Sand, coarse; water -----	2	242
Clay, gray, hard -----	18	260
Sand, brown, fine; water -----	8	268
Clay, brown, crumbly -----	23	291
Limestone, white -----	5	296
Clay, brown, crumbly -----	14	310

1N/5-34N1. J. W. Yale. Altitude about 3,315 ft. Drilled by C. H. Suffdy in 1956. 10-inch casing, perforated 200-281 ft.

Topsoil -----	17	17
Clay, sandy -----	52	69
Sand, coarse, loose -----	6	75
Clay, sandy -----	121	196
Silt; water -----	6	202
Clay, yellow -----	14	216
Sand, coarse; water -----	9	225
Clay, sticky -----	32	257
Pea gravel; water -----	14	271
Gravel (2- or 3-inch) -----	3	274
Clay, hard -----	12	286

1N/6-1J1. Samuel Krantz. Altitude about 2,800 ft. Drilled by C. H. Suffdy in 1958. No casing.

Gravel, boulders, and sand; no water -----	173	173
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1N/6-1P1. Samuel Krantz. Altitude about 2,890 ft. Drilled by C. H. Suffdy in 1958. No casing.

Boulders and alluvial fill -----	300	300
Rock, in layers; no water -----	325	625

1N/6-9Q1. Mogle Bros., formerly Yucca Mesa Estates Corp. Altitude about 3,220 ft. Drilled by Mogle Bros. in 1947. 16-inch casing, perforated 335-540 ft, uncased hole 540-570 ft.

	Thickness (feet)	Depth (feet)
Sand -----	4	4
Clay -----	18	22
Sand -----	63	85
Clay -----	7	92
Sand -----	113	205
Clay -----	17	222
Clay and gravel; dry -----	70	292
Rock -----	2	294
Clay -----	146	440
"Hill formation" -----	42	482
Clay -----	29	511
Clay and rocks -----	59	570

1N/6-13K1. Jack Stanolind (Las Casitas Corp.). Altitude about 2,735 ft. Drilled by Mogle Bros. in 1954. 12-inch casing 0-276 ft.

Topsoil -----	20	20
Sand, coarse, and gravel -----	160	180
Clay -----	20	200
Sand and gravel, cemented -----	40	240
Sand, coarse; gravel and boulders -----	241	481

1N/6-13R1. Jack Stanolind (Las Casitas Corp.). Altitude about 2,650 ft. Drilled by C. H. Suffdy in 1956. 12-inch casing, perforated 455-470 and 674-710 ft.

Sand and conglomerate fill -----	450	450
Water strata -----	17	467
Clay -----	183	650
Possible water strata -----	20	670
Clay with gravel -----	45	715

1N/6-25K1. Lacy and Richardson. Altitude about 2,700 ft.
 Drilled by C. H. Suffdy in 1957. 12-inch casing, perforated 427-552 ft.

	Thickness (feet)	Depth (feet)
Sand and gravel -----	160	160
Boulders and conglomerate -----	120	280
Sand and gravel -----	110	390
Sand and gravel; water -----	115	505
Gravel, sand and clay -----	25	530
Sand, coarse; gravel -----	22	552
Clay -----	10	562

1N/6-29H1. H. W. George, formerly Johnson. Altitude about 3,150 ft. 8-inch casing.

Not logged -----	235	235
"Blue shale" (probably decomposed bedrock); dry -----	23	258

1N/6-29J1. H. W. George. Altitude about 3,110 ft. 6-inch casing.

Sand, coarse; gravel, and boulders -----	35	35
Sand and small boulders, cemented -----	10	45
Sand, coarse -----	10	55
Gravel -----	5	60
Sand, coarse -----	25	85
Sand and boulders -----	15	100
Gravel and small boulders -----	48	148
Solid rock -----	3	151
Sand and boulders, loose -----	75	226

1N/6-29L1. Rancho Ramon Water Co., formerly S. Krantz. Altitude about 3,160 ft. Drilled by C. H. Suffdy in 1953. 12-inch casing, perforated 365-620 ft.

Sand and gravel -----	92	92
Clay and boulders -----	153	245
Clay and boulders -----	30	275
Water -----	10	285
Clay -----	228	513
Clay and sand streaks -----	52	565
Gravel; water -----	15	580
Clay -----	45	625
Silt -----	65	690

1N/6-29N1. Rancho Ramon Water Co., formerly S. Krantz. Altitude about 3,190 ft. Drilled by C. H. Suffdy in 1954. 12-inch casing, perforated 238-397 ft.

	Thickness (feet)	Depth (feet)
Alluvial fill -----	240	240
Sand and gravel; water -----	18	258
Clay -----	12	270
Sand, gravel; water -----	15	285
Sand, light; clay -----	25	310
Sand and gravel -----	20	330
Sand, tight; heavy clay content -----	84	414

1N/6-35C1. Lloyd Land Co., formerly J. F. Whitehorn. Altitude about 2,830 ft. Drilled by C. H. Suffdy in 1951. 12-inch casing 0-600 ft, 10-inch casing 600-630 ft; perforated 518-630 ft.

Sand and gravel -----	100	100
Sand, fine; clay -----	75	175
Sand, some gravel, small clay content -----	125	300
Gravel, sand, some boulders, clay binder -----	212	512
Sand and gravel; water -----	10	522
Clay and gravel -----	68	590
Sand, boulders, and clay, cemented -----	40	630

1N/7-10N1. Mrs. Edna Reagan, formerly Stockton and Reagan. Altitude about 2,385 ft. Drilled by C. H. Suffdy in 1949. 6-inch casing.

Sand and gravel -----	20	20
Clay with silt or fine sand -----	50	70
Sand, fine -----	40	110
Sand, gravel, and clay -----	102	212
Sand; water -----	28	240
Clay and some gravel (hardpan) -----	27	267

1N/7-10P1. Fred Pickett. Altitude about 2,380 ft. Drilled by C. H. Suffdy in 1956. 8-inch casing, perforated 221-276 ft.

Sand -----	8	8
Clay -----	112	120
Silt -----	20	140
Clay -----	60	200
Sand, fine -----	15	215
Sand; water -----	55	270
Clay -----	11	281

1N/7-14N1. U. S. Navy, formerly Twentynine Palms Air Academy. Altitude about 2,359 ft. Drilled by Mogle Bros. in 1943. 12-inch casing, perforated 386-425 ft.

	Thickness (feet)	Depth (feet)
Topsoil -----	16	16
Clay, sticky -----	66	82
Clay, black -----	10	92
Clay, sticky -----	294	386
Sand; water -----	39	425
Clay, sandy -----	25	450

1N/7-16P2. L. V. Peterman. Altitude about 2,440 ft. Drilled by C. H. Suffdy in 1952. 12-inch casing, perforated 264-324 ft.

Sand and gravel -----	88	88
Silt and clay -----	120	208
Sand and gravel -----	54	262
Water /probably water-bearing material/ -----	5	267
Sand and gravel; water -----	61	328

1N/7-23N1. H. O. Lovegren. Altitude about 2,380 ft. Drilled by C.K.S. Drilling Co. in 1955. 6-inch casing, perforated 170-230 ft.

Topsoil and brown sand -----	20	20
Sand, brown -----	35	55
Sand, gray, fine -----	15	70
Sand and little clay -----	40	110
Clay, brown; red rocks -----	45	155
Decomposed granite, red -----	15	170
Gravel, red -----	5	175
Rock and sand, reddish-brown -----	25	200
Gravel, brown -----	20	220
Granite, brown -----	5	225
Gravel, rounded, pea-size -----	5	230

1N/7-25E1. T. L. Brooks. Altitude about 2,480 ft. Drilled by C. H. Suffdy in 1956. 8-inch casing, perforated 175-245 ft.

Sand -----	16	16
Decomposed granite -----	147	163
Clay, sandy -----	10	173
Sand and /decomposed/ granite; water -----	23	196
Decomposed granite -----	36	232
Sand, coarse; /decomposed/ granite -----	14	246
Decomposed granite -----	4	250

1N/7-27E1. F. A. Brownlee. Altitude about 2,440 ft. Drilled by C. H. Suffdy in 1958. 8-inch casing 0-220 ft, perforated 165-215 ft.

	Thickness (feet)	Depth (feet)
Sand and silt -----	65	65
Clay -----	25	90
Silt -----	57	147
Sand; water -----	61	208
Clay -----	12	220

1N/7-28R2. Jack Stanolind (Coyote Well). Altitude 2,463.4 ft. Re-drilled by C. H. Suffdy in 1957. 6-inch casing, perforated 5-75 ft.

Old well -----	170	170
Sand, fine -----	30	200
Sand; water -----	28	228
Sand and clay -----	12	240
Sand -----	22	262

1N/7-30P1. J. M. Leach. Altitude about 2,670 ft. Drilled by C. H. Suffdy in 1952. 12-inch casing, perforated 370-424 ft. Reported to pump 200 gallons per minute; temperature of water 75°F.

Sand -----	110	110
Gravel and sand -----	130	240
Boulders, sand and gravel -----	20	260
Clay and sand -----	50	310
Sand and gravel; water at 370 ft -----	60	370
Sand, coarse; gravel -----	60	430

1N/7-32C1. E. A. Thurlow. Altitude about 2,620 ft. Drilled by C. H. Suffdy in 1952. 8-inch casing, perforated 320-385 ft. Temperature of water 75°F.

Sand -----	50	50
Clay, sand and gravel -----	45	95
Sand and gravel conglomerate -----	115	210
Silt -----	75	285
Sand and gravel, water at 320 ft -----	35	320
Sand and gravel -----	72	392

1N/7-33B1. W. A. Thompson, formerly Mrs. Lily Pope and I. W. Pope. Altitude about 2,540 ft. Drilled by C. H. Suffdy in 1952. 8-inch casing, perforated 240-287 ft.

	Thickness (feet)	Depth (feet)
Sand and gravel conglomerate -----	110	110
Silt, some clay -----	65	175
Sand and gravel, water at 236 ft -----	61	236
Sand and gravel -----	56	292

1N/7-33B2. Walter Glass. Altitude about 2,540 ft. Drilled by C. H. Suffdy in 1957. 8-inch casing, perforated 250-304 ft.

Sand and gravel -----	90	90
Alluvial fill and clay -----	164	254
Sand and water -----	60	314

1N/7-35D1. R. E. Sturdevant. Altitude about 2,485 ft. Drilled by Harry Wheeler in 1951. 12-inch casing.

Clay, silt, and sand -----	27	27
Sand, small; clay (40 percent) -----	63	90
Sand, small; clay (50 percent) -----	40	130
Hardpan; sand, small; and clay (40 percent) -----	10	140
Sand, small; clay (40 percent) -----	26	166
Sand, fine; clay and silt; little water -----	14	180
Sand and pea gravel; water -----	25	205
Sand, small; clay (20 percent) -----	10	215
Sand, small; clay (50 percent) -----	30	245
Sand, small; clay (30 percent) -----	11	256

1N/8-9L1. W. D. Fulton. Altitude 2,179.6 ft. Redrilled by C. H. Suffdy in 1956. 6-inch casing, perforated 342-386 ft.

Not logged -----	335	335
Sand (water-bearing) -----	29	364
Sandstone, brown -----	15	379
Sand and gravel; water -----	7	386

1N/8-9M1. C. R. Wolf. Altitude about 2,150 ft. Drilled by C. H. Suffdy and Earl Ramey in 1957. 8-inch casing, perforated 290-380 ft.

	Thickness (feet)	Depth (feet)
Loam, sandy -----	4	4
Clay, brown, tough -----	12	16
Clay, sandy -----	62	78
Boulders and gravel -----	9	87
Clay, sandy -----	213	300
Clay, sticky -----	7	307
Sand, fine; water -----	4	311
Sand and coarse gravel -----	9	320
Sand, coarse -----	26	346
Decomposed granite -----	6	352
Sand, coarse; water -----	17	369
Clay, blue, hard -----	11	380

1N/8-11L1. G. C. Goemans. Altitude about 2,180 ft. Drilled by C. H. Suffdy in 1956. 10-inch casing, perforated 396-455 ft. Temperature of water 161°F, reported by driller.

Sand and gravel -----	300	300
Clay and silt -----	70	370
Clay -----	20	390
Sand and gravel; water -----	18	408
Clay -----	20	428
Sand -----	12	440
Clay -----	20	460

1N/8-25R1. Pacific Coast Land Co. Altitude 2,129.5 ft. Drilled by Taylor Bros. in 1936. Casing perforated 160-218 and 224-291 ft.

Surface <u>/material/</u> -----	18	18
Gravel, dry -----	52	70
Gravel, cemented -----	90	160
Gravel; water -----	58	218
Clay -----	6	224
Gravel; water -----	67	291
Clay -----	1	292

1N/8-26G1. Wm. Schultze, formerly A. J. Bremer. Altitude 2,414.0 ft. Drilled by Taylor Bros. in 1940. 12-inch casing, perforated 502-507, 547--549, and 554-559 ft.

	Thickness (feet)	Depth (feet)
Surface /material/ -----	15	15
Gravel; dry -----	105	120
Clay and gravel -----	20	140
Gravel; dry -----	255	395
Clay and cement -----	37	432
Gravel; dry -----	5	437
Clay -----	10	447
Gravel; dry -----	33	480
Gravel; water -----	15	495
Clay -----	7	502
Gravel -----	5	507
Clay, hard -----	24	531
Clay, gravelly -----	4	535
Clay, hard -----	12	547
Gravel -----	2	549
Clay, hard -----	5	554
Gravel, coarse -----	5	559
Clay, soft -----	4	563
Gravel, small -----	7	570
Gravel, coarse -----	22	592
Clay, hard -----	11	603

1N/8-33A1. S. S. Stanley (Twentynine Palms County Water Dist.) Altitude about 2,515 ft. Drilled by W. L. Watkins in 1956. 10-inch casing, perforated 195-345 ft.

Decomposed granite, sand and silt -----	210	210
Conglomerate, rocky -----	33	243
Clay, gray -----	5	248
Sand, gray, coarse; water -----	97	345
Clay, brown -----	5	350

1N/8-33R1. S. S. Stanley (Twentynine Palms County Water Dist.)
Altitude about 2,685 ft. Drilled by W. L. Watkins in 1956. 10-inch casing, perforated 398-465 ft.

	Thickness (feet)	Depth (feet)
Decomposed granite -----	10	10
Decomposed granite conglomerate; clay, gray -----	60	70
Decomposed granite and brown sand -----	130	200
Decomposed granite; water -----	126	326
Not logged -----	2	328
"Hard shell of sand rock" -----	2	330
Decomposed granite; alternate hard streaks of clay and sandstone -----	87	417
Not logged -----	2	419
Clay, brown -----	6	425
Decomposed granite -----	76	501
Gravel, varicolored, round, large -----	4	505
Decomposed granite and sand -----	15	520
Granite, green -----	30	550

1N/9-5Q1. M. C. Elliott. Altitude 1,788.2 ft. Redrilled in 1941.
8-inch casing, perforated 96-102 ft.

Surface /material/ -----	21.6	21.6
/Sand/; water -----	7.4	29
Clay -----	7	36
Stream-gravel -----	1.5	37.5
Clay -----	1	38.5
Quicksand -----	47.5	86
Vegetable matter, black, smelly -----	1	87
Clay -----	1	88
Hardpan, iron-cemented /probably old soil horizon/ -----	1	89
Clay -----	3	92
Gravel -----	10	102
Clay -----	1	103
Gravel -----	--	--

1N/9-7E2. C. F. Wupper. Altitude about 1,925 ft. Drilled by Harry Wheeler in 1951. 8-inch casing, perforated 136-176 ft.

	Thickness (feet)	Depth (feet)
Sand, fine, loose -----	3	3
Sand and clay, hard-packed -----	33	36
Sand, medium; clay, 10 percent -----	22	58
Sand, fine; clay, 30 percent -----	17	75
Sand, medium; clay, 40 percent -----	22	97
Sand, fine; clay, 30 percent -----	15	112
Sand, medium; clay, 40 percent -----	28	140
Hardpan; sand, medium; clay, 30 percent -----	6	146
Sand, fine; silt; little water -----	10	156
Sand, medium; pea gravel; water -----	20	176
Sand, fine; clay, 60 percent -----	10	186

1N/9-8Q3. C. R. Griffin. Altitude about 1,835 ft. Drilled by Earl Ramey in 1957. 8-inch casing, perforated 55-108 ft.

Topsoil -----	3	3
Sand, coarse; gravel -----	13	16
Sand and clay -----	20	36
Caliche, hard -----	6	42
Clay, sandy, soft -----	20	62
Sand and gravel; water -----	20	82
Clay, yellow, tough -----	8	90
Sand, coarse; water -----	13	103
Clay, yellow -----	5	108

1N/9-9M2. Orin Taylor. Altitude about 1,810 ft. Drilled by Hufford in 1946. 12-inch casing, perforated 45-75 ft.

Sand and silt -----	30	30
Gravel, sand, and silt (vein of hardpan at 35 ft) -----	9	39
Clay -----	1	40
Sand, clean -----	3	43
Gravel and clay -----	22	65
Sand -----	5	70
Gravel and clay -----	8	78

1N/9-17J1. W. Q. Smith (Smith Ranch). Altitude about 1,825 ft.
 Drilled by Charles Wilson in 1954. 10-inch casing, perforated 58-108 ft.

	Thickness (feet)	Depth (feet)
Sand and clay, mixed -----	12	12
Hardpan -----	6	18
Sand and clay, mixed -----	6	24
Hardpan -----	7	31
Sand; clay, brown -----	15	46
Hardpan -----	8	54
Sand; some clay; water -----	9	63
Sand and gravel -----	10	73
Sand and gravel; little clay -----	2	75
Clay -----	5	80
Sand; clay and gravel -----	6	86
Sand and gravel -----	6	92
Sand; clay and gravel -----	8	100
Sand and gravel -----	4	104
Clay and sand -----	10	114

1N/9-18A1. P. D. Padgett. Altitude about 1,870 ft. Drilled by W. L. Watkins in 1955. 10-inch casing, perforated 110-150 ft.

Sand and silt -----	42	42
Sand, coarse -----	23	65
Sandstone, hard -----	40	105
Clay, gray -----	3	108
Sand, gray and brown, coarse; water -----	47	155

1N/9-22D4. Rico Watrus. Altitude about 1,810 ft. Drilled by W. L. Watkins in 1955. 8-inch casing, perforated 75-115 ft.

Sand, loose -----	47	47
Sand and clay -----	8	55
Clay, brown -----	5	60
Sand, coarse; gravel; water -----	60	120

1N/9-26G1. Paul Kunasz. Altitude about 1,975 ft. Drilled by W. L. Watkins in 1955. 8-inch casing, perforated 453-538 ft.

	Thickness (feet)	Depth (feet)
Sand, fine -----	117	117
Gravel to 3/8 inch -----	26	143
Sand and clay, conglomerate -----	52	195
Silt -----	162	357
Gravel to 3/8 inch -----	15	372
Sand -----	49	421
Clay, brown -----	4	425
Gravel to 3/8 inch -----	24	449
Clay, brown -----	11	460
Sand and gravel (water-bearing) -----	90	550

1N/9-27C2. A. Wrubel, formerly W. H. Campbell. Altitude 1,862.5 ft. Drilled by Taylor Bros. in 1934. 12-inch casing, perforated 238-245, 251-275, and 306-311 ft.

Surface /material/ -----	12	12
Gravel; dry -----	23	35
Clay -----	31	66
Clay streaks and gravel; water -----	2	68
Sand, packed -----	12	80
Clay, green, hard -----	34	114
Clay, yellow -----	29	143
Clay, soft, with gravel -----	4	147
Clay, yellow, hard -----	11	158
Clay, "slummy" -----	24	182
Clay, red, hard -----	26	208
Gravel, dirty, small -----	1	209
Clay, yellow, "slummy" -----	7	216
Gravel, fair -----	3	219
Clay and rock -----	5	224
Gravel, "slummy" -----	10	234
Gravel, packed -----	4	238
Gravel, good -----	7	245
Gravel, packed -----	6	251
Gravel, good -----	24	275
Clay, hard -----	25	300
Gravel, packed; clay -----	6	306
Gravel, fair -----	5	311
Clay, hard -----	39	350

1N/9-30K1. Mrs. Nicolson. Altitude 2,120.4 ft. Drilled by C. E. Emerson in 1936. 8-inch casing.

	Thickness (feet)	Depth (feet)
Surface /material/ -----	37	37
Clay -----	17	54
Clay, no rock -----	36	90
Not logged -----	40	130
Clay; seepage water at 140 -----	34	164
Gravel; water -----	4	168
Gravel, coarse; water -----	3	171

1N/9-31A1. Twentynine Palms County Water District, formerly Abell Water Co. Altitude about 2,095 ft. Drilled by Mann Bros. in 1953. 12-inch casing, perforated 120-340 ft.

Surface /material/ -----	25	25
Sand, coarse; with rock -----	65	90
Sand, coarse; with gravel -----	33	123
Gravel -----	11	134
Sand, medium -----	10	144
Sand, coarse -----	4	148
Sand, coarse; with rock -----	9	157
Gravel and sand, coarse -----	16	173
Sand, coarse, with cemented sand streaks -----	23	196
Sand, coarse -----	5	201
Sand and gravel, coarse -----	24	225
Gravel; shale; cemented sand streaks -----	15	240
Gravel -----	17	257
Rocks -----	2	259
Gravel -----	11	270
Sand, coarse -----	16	286
Sand, coarse and medium -----	64	350

1N/9-31C1. Twentynine Palms County Water District. Altitude 2,102.3 ft. Drilled by Taylor Bros. in 1937. 14-inch casing, perforated 242-306 ft.

Gravel; dry -----	120	120
Gravel, cemented -----	10	130
Clay -----	10	140
Gravel, good; water -----	96	236
Clay and cement -----	6	242
Gravel, good -----	64	306

1N/9-33F2. Robert Van Lahr (Twentynine Palms Inn). Altitude about 1,985 ft. Drilled by Taylor Bros. in 1939. 12-inch casing, perforated 132-156, 180-188, and 206-285 ft.

	Thickness (feet)	Depth (feet)
Surface /material/ -----	16	16
Clay -----	37	53
Gravel, dirty, small -----	7	60
Quicksand -----	4	64
Clay -----	14	78
Sand and gravel, packed -----	4	82
Sand, coarse; some gravel -----	3	85
Clay, gravelly -----	9	94
Gravel, dirty, small -----	4	98
Clay -----	4	102
Gravel and clay, dirty -----	4	106
Gravel, fair, small -----	9	115
Clay -----	5	120
Gravel and clay, packed -----	10	130
Clay -----	2	132
Gravel, fair, small -----	24	156
Clay -----	12	168
Sand, coarse, "slummy" -----	12	180
Gravel, fair, small -----	8	188
Gravel, dirty, small -----	9	197
Sand, dirty -----	9	206
Gravel, fair, small -----	20	226
Gravel, good, coarse -----	10	236
Gravel, fair, small -----	49	285

1N/9-35F1. H. L. Watson. Altitude 1,971.0 ft. Drilled by Taylor Bros. 12-inch casing, perforated 154-176 and 186-196 ft.

Surface, /material/ -----	12	12
Clay, hard; gravel -----	64	76
Sandstone -----	78	154
Gravel, cemented -----	22	176
Clay -----	10	186
Gravel, cemented -----	10	196
Sandstone -----	12	208
Boulders, cemented -----	4	212
Sandstone -----	41	253

1N/9-35N1. Twentynine Palms County Water District. Altitude 2,079.5 ft. Drilled by Taylor Bros. in 1935. 12-inch casing, perforated 147-247 ft.

	Thickness (feet)	Depth (feet)
Gravel and rock -----	16	16
Gravel; dry -----	8	24
Gravel and boulders -----	4	28
Gravel; dry -----	42	70
Gravel and rock, cemented -----	3	73
Gravel; dry -----	28	101
Gravel, good -----	42	143
Gravel and rock, cemented -----	4	147
Gravel, good -----	15	162
Rock and boulders -----	2	164
Gravel, good -----	83	247
Gravel and rock, cemented -----	13	260

2N/5-12G1. John Taylor (Golden Slipper Bar). Altitude about 3,075 ft. Drilled by C. H. Suffdy in 1957. 6-inch casing, perforated 130-150 ft.

Topsoil -----	3	3
Sand, coarse -----	11	14
Caliche, hard -----	8	22
Clay, brown, hard -----	38	60
Clay, brown, sandy -----	65	125
Silt, brown, fine -----	5	130
Sand, coarse; water -----	20	150

2N/5-13A1. A. C. Moran (Flamingo Estates). Altitude about 3,080 ft. Drilled by Earl Ramey in 1957. 14-inch casing, perforated 135-190 ft.

Sand -----	17	17
Gravel, coarse -----	5	22
Silt, fine -----	5	27
Sand, coarse; gravel -----	14	41
Silt -----	5	46
Gravel, coarse; boulders -----	14	60
Clay, sandy -----	52	112
Clay, yellow, tough -----	10	122
Sand, mushy; damp -----	14	136
Clay, sticky -----	10	146
Caliche -----	2	148
Sand, coarse; water -----	18	166
Caliche, hard -----	6	172
Gravel; water -----	14	186
Decomposed rock, hard -----	4	190

2N/5-23K1. A. C. Moran (Flamingo Estates). Altitude about 3,300 ft.
 Drilled by C. H. Suffdy in 1957. 12-inch casing, perforated 330-450 ft.

	Thickness (feet)	Depth (feet)
Sand, coarse; gravel -----	65	65
Boulders and gravel -----	14	79
Sand, fine, washed -----	31	110
Clay, brown, sandy -----	120	230
Silt, fine -----	5	230
Sand, coarse; water -----	2	237
Clay, brown, hard -----	171	408
Sand, very light -----	6	414
Shale, black, hard -----	51	465

2N/5-27H1. A. J. Bailey. Altitude about 3,460 ft. Drilled by C. H.
 Suffdy in 1958. 6-inch casing, perforated 160-240 ft.

Topsoil -----	7	7
Clay, sandy -----	33	40
Caliche -----	20	60
Clay, sandy -----	45	105
Boulders and gravel -----	6	111
Clay, sandy -----	76	187
Sand and gravel; water -----	49	236
Granite, blue, hard -----	4	240

2N/5-34A1. Rogers. Altitude about 3,470 ft. Drilled by C. H.
 Suffdy and Earl Ramey in 1958. 6-inch casing, perforated 200-220 ft.

Topsoil -----	7	7
Clay, brown, hard -----	28	35
Clay, brown, soft, sandy -----	70	105
Boulders and gravel -----	15	120
Clay, yellow, sandy -----	63	183
Silt, fine; wet -----	4	187
Sand, coarse; gravel (water-bearing) -----	33	220

2N/5-34B1. J. B. Solomon. Altitude about 3,510 ft. Drilled by
 C. H. Suffdy in 1957. 6-inch casing, perforated 200-230 ft.

Topsoil -----	1	1
Hardpan, brown -----	14	15
Clay, brown, sandy -----	80	95
Boulders and coarse gravel -----	10	105
Clay, brown, sandy -----	60	165
Clay, yellow, hard -----	36	201
Sand, coarse; gravel (water-bearing) -----	29	230

2N/6-321. Tenth Avenue Baptist Church. Altitude about 2,860 ft.
 Drilled by Harry Wheeler in 1957. 8-inch casing, perforated 348-388 and
 408-448 ft.

	Thickness (feet)	Depth (feet)
Sand and gravel -----	249	249
Boulders and gravel (a flow of air) -----	7	256
Sand, silt, and gravel -----	43	299
Boulders and air -----	8	307
Sand, silt, and gravel -----	42	349
Boulders -----	7	356
Sand, silt, and gravel -----	59	415
Clay, brown -----	13	428
Decomposed granite -----	21	449
Granite, gray, hard -----	9	458

2N/6-701. N. J. Landers. Altitude about 3,070 ft. Drilled by Harry
 Wheeler in 1954. 10-inch casing, perforated 155-174, 181-210, 218-244 ft.

Sand; clay, 40 percent -----	33	33
Gravel, pea-size -----	8	41
Sand; clay, 40 percent -----	24	65
Sand, fine; clay, 60 percent -----	30	95
Sand; clay, 40 percent -----	65	160
Silt and pea gravel -----	6	166
Gravel; sand and silt -----	45	211
Sand; clay, 40 percent -----	28	239
Sand; clay, 20 percent -----	13	252

2N/6-8N1. Gertrude Gale. Altitude about 3,080 ft. Drilled by C. H.
 Suffdy and Earl Ramey in 1958. No casing.

"Topsand" -----	17	17
Clay, sandy -----	173	190
Sand and gravel -----	12	202
Clay, blue -----	15	217
Shale, blue -----	34	251
Granite, blue, very hard; no water -----	34	285

2N/6-18A1. M. H. Williams. Altitude about 3,100 ft. Drilled by Harry Wheeler in 1954. 8-inch casing, perforated 166-216 ft.

	Thickness (feet)	Depth (feet)
Sand; clay, 40 percent -----	14	14
Sand; pea gravel -----	15	29
Sand; clay, 60 percent -----	32	61
Sand; clay, 40 percent -----	29	90
Sand; silt; clay -----	24	114
Sand; clay, 40 percent -----	34	148
Sand; clay, 60 percent -----	28	176
Sand; silt -----	4	180
Sand; water -----	28	208
Sand; pea gravel -----	6	214
Sand; clay, 40 percent -----	8	222

2N/6-18G1. J. M. Barter. Altitude about 3,120 ft. Drilled by C. H. Suffdy in 1956. 6-inch casing, perforated 140-170 ft.

Sand, coarse, loose -----	7	7
Sand, fine, tight -----	18	25
Clay, sandy -----	65	90
Sand, coarse, loose -----	6	96
Clay, sandy -----	34	130
Clay, yellow, sticky -----	5	135
Sand, coarse; gravel -----	35	170

2N/6-18J1. Joseph Becker. Altitude about 3,135 ft. Drilled by C. H. Suffdy in 1946. 6-inch casing, not perforated.

Soil -----	16	16
Clay, brown, sandy -----	48	64
Clay, yellow -----	73	137
Sand, coarse -----	39	176
Decomposed granite, gray -----	55	231
Clay, brown, sticky -----	5	236
Sandstone, porous; water -----	31	267

2N/6-30L1. W. J. McFarland. Altitude about 3,325 ft. Drilled to 163 ft by C.K.S. Drilling Co. in 1956. Deepened to 377 ft by Earl Ramey in 1956. 6-inch casing, perforated 123-163 and 325-375 ft.

	Thickness (feet)	Depth (feet)
Topsoil -----	10	10
Gravel, red; sand -----	42	52
Gravel, coarse -----	1	53
Decomposed granite and black rock -----	30	83
Gravel, coarse -----	7	90
Sand and brown gravel -----	50	140
Gravel, coarse -----	7	147
Sand and gravel -----	16	163
Decomposed granite -----	22	185
Gravel and rocks -----	40	225
Gravel, coarse; rocks -----	15	240
Clay, yellow, sandy -----	50	290
Sandstone, hard -----	10	300
Quartz, rose; water -----	5	305
Granite, gray, very hard -----	2	307
Sand; water -----	1	308
Granite, blue, hard -----	7	315
Sand, packed; water -----	2	317
Granite, gray, hard -----	23	340
Sand, packed; water -----	2	342
Granite, gray -----	15	357
Sand, packed; water -----	6	363
Granite, very hard -----	6	369
Sand, coarse; water -----	2	371
Granite, gray, hard -----	6	377

2N/7-26B1. R. E. Kirschman. Altitude about 2,590 ft. Drilled by C. H. Suffdy in 1957. 10-inch casing 0-8, open hole 8-575 ft.

Alluvial fill -----	360	360
Boulders and sand -----	45	405
Granite; water at 540 ft -----	135	540
Rock, extremely hard -----	35	575

2N/7-36R1. L. J. Rogers. Altitude about 2,320 ft. Drilled by C. H. Suffdy in 1952. 12-inch casing perforated 305-368 ft.

	Thickness (feet)	Depth (feet)
Sand and gravel -----	5	5
Caliche and clay -----	65	70
Sand and gravel -----	40	110
Sand; heavy clay content -----	60	170
Gravel and coarse sand -----	20	190
Silt -----	40	230
Sand and gravel; water at 305 ft -----	75	305
Sand, coarse; gravel -----	67	372

2N/8-20A1. A. L. McGuire. Altitude about 2,260 ft. Drilled by C. H. Suffdy in 1958. 8-inch casing, perforated 509-554 ft.

Sand and gravel -----	475	475
Sand, fine -----	27	502
Gravel and sand -----	5	507
Sand -----	53	560

2N/8-22H1. Eugene Holt. Altitude about 2,120 ft. Drilled by C. H. Suffdy in 1958. 8-inch casing, perforated 340-390 ft.

Sand and gravel -----	60	60
Boulder -----	10	70
Alluvial fill -----	110	180
Silt and clay -----	120	300
Sand and clay -----	35	335
Sand -----	20	355
Sand, clay -----	35	390

2N/8-25N1. M. E. Melvin. Altitude about 1,945 ft. Drilled by C. H. Suffdy in 1956. 10-inch casing, perforated 154-210 ft.

Sand and gravel -----	100	100
Clay and silt -----	54	154
Sand and gravel; water -----	46	200
Clay -----	15	215

2N/9-19N3. H. A. Porter. Altitude about 1,855 ft. Drilled by H. A. Porter in 1950. 8-inch casing.

	Thickness (feet)	Depth (feet)
Soil -----	8	8
Clay -----	4	12
Sand and gravel -----	25	37
Clay, blue -----	8	45
Not logged -----	29	74
Clay, very hard -----	--	--
Sand, coarse -----	--	136

2N/9-30Q1. C. T. Parker. Altitude about 1,765 ft. Drilled by C. H. Suffdy and Earl Ramey in 1957. 10-inch casing, perforated 60-100 ft.

Blow-sand -----	5	5
Clay, blue, tough -----	18	23
Quicksand, fine -----	22	45
Sand, shelly; clay -----	34	79
Clay, brown, sticky -----	4	83
Sand, coarse; water -----	13	96
Clay, sticky -----	4	100

1S/5-4R5. Fred LaFerney. Altitude about 3,520 ft. Drilled by Earl Ramey in 1957. 6-inch casing, perforated 40-154 ft.

"Topsand" -----	2	2
Granite, gray, soft -----	16	18
Granite, gray, hard -----	35	53
Clay, yellow -----	1	54
Sandstone, porous; water -----	6	60
Granite, blue, hard -----	22	82
Sandstone, porous; water -----	8	90
Granite, blue, hard -----	33	123
Sand, coarse; water -----	4	127
Limestone, black, hard -----	43	170
Sandstone, porous; water -----	11	181
Granite, blue -----	33	214
Sandstone, porous; water -----	3	217
Granite, blue, hard -----	4	221

1S/5-5A1. Robert Jernberg. Altitude about 3,550 ft. Drilled by C. H. Suffdy in 1957. 12-inch casing 0-258, 10-inch casing 258-360 ft, perforated 145-340 ft.

	Thickness (feet)	Depth (feet)
Sand and gravel fill -----	100	100
Boulders -----	45	145
Decomposed granite -----	15	160
Boulders bound with clay; caliche -----	85	245
Decomposed granite, soft -----	10	255
Boulders; white clay; caliche, tight -----	135	390

1S/5-9B1. W. L. Mann. Altitude about 3,640 ft. Drilled by Earl Ramey in 1955. No casing.

Not logged -----	65	65
Granite, blue -----	47	112
Sandstone, porous -----	2	114
Granite, blue -----	7	121
Sand; water -----	9	130
Granite; blue, hard -----	7	137

1S/5-9J1. Glenn Annabelle. Altitude about 3,800 ft. Drilled by C. H. Suffdy and Earl Ramey in 1957. 10-inch casing, 0-14 ft, not perforated.

"Wash" sand -----	2	2
Decomposed firm, gray -----	16	18
Granite, blue -----	69	87
Sandstone porous; water -----	4	91
Granite, blue, hard -----	35	126
Sandstone, soft; water -----	9	135
Lime, black, hard -----	32	167
Sand, packed; water -----	2	169
Granite, black, very hard -----	11	180

2S/9-3Q1. National Park Service. Altitude about 3,675 ft. Drilled by C. H. Suffdy in 1950. No casing.

	Thickness (feet)	Depth (feet)
Sand, coarse; gravel fill -----	20	20
Sand; gravel; clay content -----	75	95
Granite with some quartz content -----	55	150
Quartz with some decomposed granite -----	10	160
Granite, gray -----	30	190
Granite and quartz, faulted -----	2	192
Granite, gray, very tight; no water -----	17	209

2S/9-11D1. National Park Service. Altitude about 3,675 ft. Drilled by C. H. Suffdy in 1950. No casing.

Fill and coarse gravel -----	20	20
Sand; gravel; clay content -----	20	40
Schist, green -----	5	45
Granite, light gray, very hard; no water -----	6	51

Table 5.--Chemical analyses of waters from wells

Constituents: The sum of determined constituents is the sum of the tabulated constituents, the bicarbonate being converted to the carbonate equivalent by dividing by the factor 2.03. Because all of the commonly occurring major constituents (except silica in many of the analyses) were analytically determined, the values for dissolved solids and sum of determined constituents should be approximately the same. All values have been rounded where necessary to conform to the standards of the U. S. Geological Survey, Quality of Water Branch. Numbers in parentheses are values calculated by the Geological Survey, Ground Water Branch. Where a appears it indicates the values for both sodium and potassium.

Analyzing Laboratory: DPH California Department of Public Health,
DWR California Department of Water Resources, ESB E. S. Babcock
and Sons, GS U. S. Geological Survey, HTL Hoag Testing Laboratory,
RGO R. G. Osborne, SBC San Bernardino County Flood Control District,
USN U. S. Navy.

Well number	1N/5-2N1:	1N/5-12D1:	1N/5-19B1		
Constituents in parts per million					
Silica (SiO ₂)	--	--	--	--	28
Iron (Fe)	--	--	--	--	--
Calcium (Ca)	32	2.0	18	12	31
Magnesium (Mg)	15	0	3	3	6
Sodium (Na)	33	74	11	8	51
Potassium (K)	1.2	.8	2	.8	2.7
Bicarbonate (HCO ₃)	108	134	63	51	183
Carbonate (CO ₃)	0	5	0	0	0
Sulfate (SO ₄)	(101)	19	12	8	25
Chloride (Cl)	14	17	12	3	23
Fluoride (F)	.6	5.0	--	.3	.7
Nitrate (NO ₃)	--	5.0	6.5	13	6.3
Boron (B)	--	.44	.09	.04	.15
Dissolved solids (Dis. S.)	--	219	101	86	280
Sum of determined constituents	(250)	(194)	(96)	(73)	(264)
Hardness as CaCO ₃	142	4	(57)	(42)	(102)
Percent sodium (% Na)	33	97	(28)	(29)	(51)
Specific conductance (micromhos at 77°F)	404	339	158	135	410
pH	8.4	8.2	7.8	7.0	7.6
Temperature (°F)	--	--	60	59	62
Date collected (Date)	4-20-53	9-16-56	3-27-52	2-25-54	12-28-5
Depth of well in feet (Depth)	--	300	208		
Analyzing laboratory (Lab.)	GS	SBC	DWR	DWR	DWR
Laboratory number (No.)	6843	3984	1660	4026	T5562

Well number	1N/5-22M1	1N/5-34K1	1N/5-36H1	1N/6-4Q1	
Constituents in parts per million					
SiO ₂	--	--	22	28	--
Fe	--	--	--	.40	--
Ca	38	27	24	108	2.5
Mg	6.2	3	6	20	.9
Na	32	16	21	14	73
K	1.3	1.4	1.6	--	2.3
HCO ₃	174	110	111	116	164
CO ₃	0	0	0	--	0
SO ₄	24	8	9	41	12
Cl	16	9	18	47	14
F	.6	.4	.3	--	1.9
NO ₃	--	6.4	7	220	--
B	--	.08	.05	--	--
Dis. S.	--	124	164	534	--
Sum	(204)	(125)	(164)	(535)	(188)
Hardness	120	(80)	(85)	352	10
% Na	36	(30)	(34)	(19)	92
Micromhos	362	236	225	--	359
pH	8.2	7.6	7.4	--	8.1
°F	64	59	58	--	82
Date	2-10-53	2-25-54	12-28-56	12-14-17	9-11-53
Depth	110	378		160	726
Lab.	GS	DWR	DWR	GS	GS
No.	6606	4027	T5560	413	9250

Well number	1N/6-6E1	1N/6-10F1	1N/6-13D1	1N/6-25M1
Constituents in parts per million				
SiO ₂	--	--	--	--
Fe	--	--	--	--
Ca	4.3	22	21	17
Mg	.3	5.3	.5	2
Na	67	52	72	70
K	1.6	3.5	2.3	1.8
HCO ₃	97	164	178	181
CO ₃	18	0	0	0
SO ₄	17	17	46	43
Cl	20	28	11	10
F	.3	1.0	1.9	2.0
NO ₃	4.5	--	3.7	0
B	--	--	.27	.18
Dis. S.	--	--	299	270
Sum	(181)	(210)	(247)	(235)
Hardness	12	77	(54)	51
% Na	91	58	(74)	74
Micromhos	325	377	422	403
pH	8.3	8.2	7.8	8.0
OF	70	--	--	--
Date	5-31-53	9-11-53	5-5-54	3-15-56
Depth	316	385	613	.
Lab.	GS	GS	DWR	SBC
No.	7446	9251	P-680	3828

Well number	1N/6-25M1		1N/6-26N1		1N/6-29L1
Constituents in parts per million					
SiO ₂	--	24	--	--	13
Fe	--	--	--	--	--
Ca	10	15	26	0	0
Mg	7	6	5.0	0	0
Na	34	34	18	62	64
K	1.7	2	1.2	.5	.4
HCO ₃	117	119	114	93	52
CO ₃	0	0	0	17	33
SO ₄	12	10	13	13	7
Cl	8	17	12	11	12
F	.7	.7	.3	1.0	.8
NO ₃	12	10	6	12	13
B	.02	.03	--	.15	.10
Dis. S.	153	172	124	162	120
Sum	(143)	(178)	(138)	(163)	(169)
Hardness	(54)	(62)	86	0	(0)
% Na	(57)	(53)	31	100	(100)
Micromhos	257	250	248	293	285
pH	7.8	7.8	7.4	9.3	9.4
OF	72	74	59	--	66
Date	2-25-54	12-27-56	4-1-57	11-23-53	12-28-56
Depth			610	690	
Lab.	DWR	DWR	SBC	SBC	DWR
No.	4018	T-5557	4067	2910	T-5543

Well number	1N/6-29N1		1N/6-31P1		1N/6-35C1
Constituents in parts per million					
SiO ₂	--	22	--	--	--
Fe	--	--	--	--	--
Ca	25	20	27	11	10
Mg	4	5	13	5.0	4
Na	34	26	46	44	46
K	1.9	1	2.8	2.1	2.0
HCO ₃	142	116	139	119	120
CO ₃	0	0	0	0	0
SO ₄	13	5	55	16	17
Cl	13	17	31	16	12
F	.7	.3	.5	.6	.7
NO ₃	15	.6	9.3	9.5	14
B	.02	.05	.03	0	.14
Dis. S.	186	150	251	143	177
Sum	(177)	(154)	(253)	(163)	(165)
Hardness	(78)	(70)	119	47	(41)
% Na	(48)	(44)	44	66	(69)
Micromhos	308	250	450	282	284
pH	7.9	7.7	8.1	7.4	8.0
OF	--	68	--	--	--
Date	2-25-54	12-28-56	11-23-53	--	3-25-54
Depth	414	:	325	630	53
Lab.	DWR	DWR	SBC	SBC	DWR
No.	4022	T5544	2909	4066	4021

Well number	1N/6-35C1		1N/7-10M1		1N/7-16P1
Constituents in parts per million					
SiO ₂	20	35	--	19	--
Fe	--	--	--	--	--
Ca	14	13	13	15	21
Mg	4	9.1	4	4	.5
Na	43	41	34	34	39
K	2.7	2.7	1.4	1.6	1.3
HCO ₃	116	119	98	113	108
CO ₃	0	0	12	0	0
SO ₄	17	28	8	7	24
Cl	20	16	6	13	14
F	.6	.6	.7	.6	.6
NO ₃	11	8.1	14	13	11
B	.10	0	.04	.05	.21
Dis. S.	216	235	145	188	200
Sum	(189)	(212)	(141)	(163)	(165)
Hardness	(51)	(69)	(48)	(53)	(54)
% Na	(63)	(55)	(59)	(57)	(60)
Micromhos	290	303	248	250	256
pH	7.9	8.2	8.4	8.1	7.3
°F	--	70	--	58	--
Date	12-27-56	12-27-57	2-25-54	12-27-56	5-5-54
Depth	630		267		360
Lab.	DWR	DWR	DWR	DWR	DWR
No.	T-5568	T-1491	4019	T-5567	P-666

Well number	1N/7-28R2	:	1N/7-35D1	:	1N/8-1D1
Constituents in parts per million					
SiO ₂	22	5	--	39	--
Fe	5.5	--	--	--	--
Ca	9.2	24	16	17	32
Mg	2.4	9	5	6.7	5.5
Na	a44	a25	34	35	198
K	--	--	2.0	2.7	4.0
HCO ₃	130	125	124	128	84
CO ₃	--	0	0	0	0
SO ₄	13	17	14	20	334
Cl	3.6	14	9	13	60
F	--	.6	.8	.8	14
NO ₃	5.0	--	14	7.3	--
B	--	--	.02	.08	--
Dis. S.	180	--	178	233	--
Sum	(169)	(157)	(156)	(204)	(688)
Hardness	33	(97)	(60)	(70)	102
% Na	(74)	34	(54)	(51)	80
Micromhos	--	312	308	288	1,150
pH	--	--	7.8	8.1	7.9
°F	--	--	--	52	78
Date	12-15-17	2-16-51	2-25-54	12-30-57	8-7-53
Depth	170	256			212
Lab.	GS	ESB	DWR	DWR	GS
No.	--	--	4020	T-1492	9247

Well number	1N/8-9L1				: 1N/8-12G1
Constituents in parts per million					
SiO ₂	--	14	--	16	--
Fe ²	--	.1	--	--	--
Ca	46	43	45	54	13
Mg	8.3	8	9	11	1
Na	a92	a180	120	127	210
K	--	--	3.0	3.9	1.9
HCO ₃	113	115	115	119	73
CO ₃	--	0	0	0	0
SO ₄	170	210	224	251	328
Cl	50	146	44	63	63
F	5.3	5.5	6.0	1.4	10
NO ₃	8	--	13	10	0
B	--	.23	.38	.25	.22
Dis. S.	--	500	533	584	663
Sum	(436)	(664)	(521)	(596)	(663)
Hardness	(149)	140	(149)	(180)	(36)
% Na	57	(74)	(63)	(60)	(92)
Micromhos	--	--	855	812	960
pH	7.8	7.7	7.7	7.7	7.2
°F	--	76	70	--	65
Date	4- -41	3- -52	2-26-54	12-27-56	4-15-52
Depth	386				420
Lab.	SBC	USN	DWR	DWR	DWR
No.	--	1483	4017	T-5565	1966

Well number	1N/9-5Q1	1N/9-5Q2	1N/9-5Q3	1N/9-6N1	1N/9-7E1
Constituents in parts per million					
SiO ₂	--	--	--	--	--
Fe	--	0.1	0.2	0.1	0.2
Ca	55	46	44	39	38
Mg	7.2	17	17	6	3
Na	a110	a112	a86	a247	a203
K	--	--	--	--	--
HCO ₃	82	88	83	98	73
CO ₃	--	--	--	0	0
SO ₄	448	230	212	460	380
Cl	96	84	56	73	66
F	12	8.5	9.0	14	13
NO ₃	--	--	--	--	--
B	--	--	--	--	--
Dis. S.	--	--	--	--	--
Sum	(768)	(541)	(465)	(887)	(739)
Hardness	(167)	187	181	124	107
% Na	(59)	(57)	51	82	81
Micromhos	--	--	--	--	--
pH	8.2	7.0	7.2	8.0	7.8
O _F	70 $\frac{1}{2}$	--	--	--	--
Date	4- -41	6- -37	6- -37	6-2-37	6- -37
Depth	103	110	45	175	169.0
Lab.	SBC	DPH	DPH	DPH	DPH
No.	--	--	--	--	--

Well number	1N/9-7E1	1N/9-8D2	1N/9-8H2	1N/9-8Q2	1N/9-9F1
Constituents in parts per million					
SiO ₂	--	--	--	--	--
Fe	--	--	--	--	--
Ca	35	42	33	42	206
Mg	4	8	5	8	110
Na	185	250	210	250	al, 110
K	3.4	3.8	3.3	3.8	--
HCO ₃	54	85	61	85	368
CO ₃	0	2	0	2	--
SO ₄	330	462	353	482	1,920
Cl	61	97	83	97	746
F	14	10	12	10	11
NO ₃	9.4	0	22	0	2
B	.34	.52	.36	.52	--
Dis. S.	565	934	650	934	--
Sum	(669)	(917)	(752)	(937)	(4,290)
Hardness	(103)	140	(102)	140	(967)
% Na	(79)	79	(81)	79	71
Micromhos	1,040	1,500	1,090	1,600	--
pH	7.3	8.3	7.7	8.3	7.5
°F	--	--	--	--	72
Date	2-25-55	1-3-55	2-25-55	1-3-53	4- -41
Depth	169.0	70	72.5	90	36
Lab.	DWR	SEC	DWR	SBC	SBC
No.	5388	3382	5386	5382	--

Well number	1N/9-9M1	1N/9-9Q2	1N/9-10D1	1N/9-15G1	1N/9-15M1
Constituents in parts per million					
SiO ₂	--	--	--	--	--
Fe	--	0.2	--	--	--
Ca	29	122	2	17	16
Mg	6	46	.4	6	5.4
Na	a147	a881	a346	114	112
K	--	--	--	3.5	3.5
HCO ₃	73	244	173	222	225
CO ₃	5	5	34	7	0
SO ₄	212	1,700	400	75	74
Cl	90	306	112	21	22
F	10	8.0	9.2	10	6.0
NO ₃	--	--	--	0	5.6
B	--	--	--	.46	.40
Dis. S.	--	--	--	391	373
Sum	(535)	(3,190)	(989)	(363)	(356)
Hardness	98	496	(52)	67	(426)
% Na	(77)	(80)	99	78	(78)
Micromhos	--	--	--	628	606
pH	8.2	8.2	9.4	8.3	7.9
Op	--	--	78	--	--
Date	7- -37	7- -37	4- -41	10-11-56	5-5-54
Depth	60	21	301	301	312
Lab.	DPH	DPH	SBC	SBC	DWR
No.	--	--	--	3983	P-681

Well number	1N/9-16D1	1N/9-16G1	1N/9-17E1	1N/9-17G1	1N/9-17J6
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Constituents in parts per million

SiO ₂	--	--	4.0	--	--
Fe	--	--	.1	--	--
Ca	38	12	38	37	33
Mg	5	8.4	5	2.0	6
Na	a228	137	a265	231	a165
K	--	6.6	--	4.9	--
HCO ₃	116	148	73	94	217
CO ₃	--	0	0	0	--
SO ₄	446	(143)	465	381	199
Cl	85	58	106	89	60
F	--	7.0	12	8.0	--
NO ₃	1.5	--	--	.5	5.0
B	.50	--	--	.40	.28
Dis. S.	775	--	--	821	581
Sum	(861)	(445)	(931)	(800)	(575)
Hardness	(115)	(64)	115	100	(107)
% Na	(81)	80	83	83	(77)
Micromhos	1,190	764	--	1,180	890
pH	8.2	7.9	7.6	7.9	8.2
OF	--	74	--	--	--
Date	7-25-52	9-10-53	6- -37	7-1-57	7-25-52
Depth	96	156.0	130	85	114
Lab.	DWR	GS	DPH	DWR	DWR
No.	2404	9248	--	--	2414

Well number	1N/9-17J2	1N/9-17J1	1N/9-20A1	1N/9-20R1	
Constituents in parts per million					
SiO ₂	--	--	--	22	--
Fe	--	--	--	--	0
Ca	31	29	12	14	20
Mg	14	5	4	3	8
Na	a98	138	105	107	a58
K	--	2.9	2	1.2	--
HCO ₃	205	198	178	162	161
CO ₃	0	2	0	0	0
SO ₄	77	156	80	86	38
Cl	71	41	25	37	26
F	7.5	6.0	5.0	1.4	4.0
NO ₃	--	2.5	3.5	2	--
B	0	.28	.16	.30	--
Dis. S.	--	483	333	368	--
Sum	(400)	(481)	(325)	(354)	(233)
Hardness	135	91	(46)	(47)	83
% Na	61	76	(82)	(82)	60
Micromhos	--	814	550	520	--
pH	8.0	8.5	8.1	8.0	--
OF	--	--	--	--	--
Date	6- -37	11-10-54	2-26-54	12-27-56	6- -37
Depth	85	114	52		--
Lab.	DPH	SBC	DWR	DWR	DPH
No.	--	3324	4013	T5564	--

Well number	1N/9-20R1	1N/9-21J1	1N/9-22B1	1N/9-22C3
Constituents in parts per million				
SiO ₂	--	--	--	--
Fe	--	--	--	--
Ca	15	39	4	5
Mg	1.7	10	4.9	5
Na	a82	a82	a225	280
K	--	--	--	6.2
HCO ₃	166	185	304	324
CO ₃	--	--	--	0
SO ₄	53	62	150	234
Cl	22	70	78	86
F	4.0	9.0	14	--
NO ₃	3	--	--	1.5
B	--	--	--	.85
Dis. S.	--	--	--	767
Sum	(263)	(363)	(626)	(778)
Hardness	(44)	139	(30)	(32)
% Na	(62)	56	94	(94)
Micromhos	--	--	--	1,240
pH	8.3	--	7.8	8.2
OF	80	--	78	--
Date	4- -41	5- -37	4- -41	7-18-52
Depth	--	200	309	60
Lab.	SBC	DPH	SEC	DWR
No.	--	--	--	2155

Well number	1N/9-22D5	1N/9-22E1	1N/9-22E3	1N/9-26G1	1N/9-27C1
Constituents in parts per million					
SiO ₂	--	--	--	--	--
Fe ²	0.2	--	0.15	--	--
Ca	17	18	18	12	13
Mg	8	2.6	8.3	3	5
Na	a66	a63	--	396	75
K	--	--	--	3.1	2.4
HCO ₃	166	172	--	156	183
CO ₃	5	--	0	7	2
SO ₄	38	30	48	457	31
Cl	24	14	14	196	11
F	9.0	8.2	3.8	6.0	7.0
NO ₃	--	2	.7	3.5	0
B	--	--	--	1.2	.14
Dis. S.	--	--	--	1,180	249
Sum	(249)	(223)	(93)	(1,160)	(236)
Hardness	(76)	(56)	164	42	51
% Na	66	71	--	95	75
Micromhos	--	--	--	1,840	401
pH	8.2	8.0	7.5	8.3	8.2
OF	--	72 $\frac{1}{2}$	--	--	--
Date	7- -37	4- -41	11-7-51	8-3-55	12-14-54
Depth	--	87	127	550	145
Lab.	DPH	SBC	DPH	SBC	SBC
No.	--	--	110	3627	3348

Well number	1N/9-27K1	1N/9-29F1	1N/9-29R1	1N/9-30K1
Constituents in parts per million				
SiO ₂	--	--	--	--
Fe	0	0.1	--	0.2
Ca	18	12	10	23
Mg	12	2	6	3.6
Na	a32	a122	a145	a72
K	--	--	--	--
HCO ₃	156	29	57	218
CO ₃	0	19	13	--
SO ₄	15	128	176	26
Cl	15	77	60	17
F	6.0	15	18	5.3
NO ₃	--	--	--	4
B	--	--	--	--
Dis. S.	--	--	--	--
Sum	(175)	(389)	(451)	(258)
Hardness	95	37	(27)	(72)
% Na	42	88	92	68
Micromhos	--	--	--	--
pH	8.0	8.0	9.2	7.8
OF	--	--	118	76
Date	7- -37	6- -37	4- -41	4- -41
Depth	165	380		121
Lab.	DPH	DPH	SBC	SBC
No.	--	--	--	--

Well number	1N/9-30Q1	:	1N/9-31A1	:	1N/9-31A1
Constituents in parts per million					
SiO ₂	--	--	--	30	--
Fe	1.5	--	--	--	--
Ca	26	13	12	11	10
Mg	7	2.1	2	3.2	4
Na	a91	37	38	36	44
K	--	1.6	1.1	1.0	1.4
HCO ₃	190	112	110	102	107
CO ₃	0	0	0	0	0
SO ₄	54	(13)	10	12	19
Cl	57	10	9	13	13
F	4.0	1.6	2.0	1.6	2.8
NO ₃	--	--	8.9	6.4	11
B	--	--	.18	.09	.04
Dis. S.	--	--	120	175	178
Sum	(334)	(133)	(137)	(164)	(158)
Hardness	94	41	(38)	40	(41)
% Na	68	65	(68)	(65)	(69)
Micromhos	--	248	236	241	281
pH	7.5	8.0	7.7	7.2	8.1
O _F	--	85	--	--	--
Date	5- -37	9-10-53	2-25-55	6-19-57	2-26-54
Depth	143.5	350			117
Lab.	DPH	USGS	DWR	DWR	DWR
No.	--	9249	5392	7999	4014

Well number	1N/9-31A2	1N/9-31A3	1N/9-31C1		
Constituents in parts per million					
SiO ₂	20	--	--	--	26
Fe	--	--	--	--	--
Ca	13	12	14	14	16
Mg	3	2	2	2	0
Na	45	a61	38	38	39
K	1.6	--	1.2	1.2	1.6
HCO ₃	110	112	117	113	107
CO ₃	0	0	0	0	0
SO ₄	27	58	11	9	12
Cl	14	13	7	11	11
F	2.5	4.0	2.0	1.8	1.3
NO ₃	9	--	12	8.9	2.7
B	.10	--	.04	.06	.36
Dis. S.	200	--	162	146	175
Sum	(189)	(205)	(145)	(142)	(163)
Hardness	(44)	38	(43)	(43)	(40)
% Na	(66)	78	(65)	(65)	67
Micromhos	285	--	262	263	257
pH	8.1	7.1	7.9	7.9	7.4
OF	--	--	73	--	80
Date	12-26-56	6- -37	2-26-54	5-7-56	12-17-57
Depth	117	115	306		
Lab.	DWR	DPH	DWR	DWR	DWR
No.	T-5542	--	4012	R-1079	R-1862

Well number	1N/9-32F1	1N/9-32H2	1N/9-32H3	1N/9-32R1	1N/9-33F1
Constituents in parts per million					
SiO ₂	--	--	--	--	--
Fe	0.2	0	0.2	0.2	0.1
Ca	18	13	13	26	22
Mg	2	6	4	3	3
Na	a42	a52	a38	a23	a29
K	--	--	--	--	--
HCO ₃	142	117	102	107	112
CO ₃	0	--	5	0	0
SO ₄	13	31	8	15	10
Cl	10	33	22	17	18
F	1.5	3.0	1.8	1.1	1.5
NO ₃	--	--	--	--	--
B	--	--	--	--	--
Dis. S.	--	--	--	--	--
Sum	(157)	(196)	(142)	(138)	(139)
Hardness	53	58	49	78	68
% Na	63	66	63	39	48
Micromhos	--	--	--	--	--
pH	7.5	7.9	7.5	7.5	8.0
OF	--	--	--	--	--
Date	2- -37	6- -37	5- -37	5- -37	6- -37
Depth	--	125	35	75	175
Lab.	DPH	DPH	DPH	DPH	DPH
No.	--	--	--	--	--

Well number	1N/9-33F2:	1N/9-33F3:	1N/9-33J1	:	1N/9-34A1
Constituents in parts per million					
SiO ₂	--	--	29	--	--
Fe	--	0	.07	--	--
Ca	6	14	20	26	15
Mg	1	2.4	3.6	6	6
Na	36	a33	a42	a31	50
K	1	--	--	--	2.2
HCO ₃	98	98	156	146	159
CO ₃	2	0	--	0	0
SO ₄	6	15	14	8	19
Cl	12	15	8.4	20	7
F	1.6	1.5	--	--	7.0
NO ₃	7.2	--	1.7	--	4.5
B	.06	--	--	--	.14
Dis. S.	148	--	194	--	176
Sum	(121)	(129)	(196)	(163)	(189)
Hardness	(19)	44	65	93	(62)
% Na	(79)	62	(58)	43	(63)
Micromhos	180	--	--	--	347
pH	8.3	--	--	7.3	8.0
OF	--	--	--	--	--
Date	4-15-52	6- -37	12-16-17	6- -37	2-26-54
Depth	285	65	16	--	--
Lab.	DWR	DPH	GS	DPH	DWR
No.	1832	--	--	--	4009

Well number	1N/9-34A1:	1N/9-35F1:	1N/9-35N1:	2N/5-1H1	
Constituents in parts per million					
SiO ₂	25	--	17	18	--
Fe	--	0.2	--	0.1	--
Ca	16	13	15	38	42
Mg	4	17	3	7	7.8
Na	55	a194	71	(a53)	55
K	2.7	--	2.7	--	2.7
HCO ₃	156	398	122	151	138
CO ₃	0	19	0	0	0
SO ₄	21	115	72	61	(88)
Cl	18	34	22	32	38
F	.7	20	2.0	2.5	.8
NO ₃	3	--	6.5	--	--
B	.15	--	.25	.18	--
Dis. S.	232	--	264	--	--
Sum	(222)	(608)	(271)	(286)	(302)
Hardness	(56)	103	(49)	124	137
% Na	(66)	(80)	(74)	(48)	46
Micromhos	310	--	400	--	520
pH	7.8	8.6	8.0	8.0	8.1
OF	--	--	76	--	--
Date	12-26-56	6- -37	12-26-56	11- -51	2-25-53
Depth	--	253	244.2	85	
Lab.	DWR	DPH	DWR	USN	GS
No.	T-5563	--	T5540	--	6607

Well number	2N/5-1H1		:	2N/6-6D1		:	2N/6-7R1	
Constituents in parts per million								
SiO ₂	--	23		18	18		--	
Fe	--	--		0	--		--	
Ca	37	35		20	27		34	
Mg	6	7		7	5		7.5	
Na	59	58		(a66)	49		43	
K	2.5	3.1		--	2.3		2.5	
HCO ₃	146	149		78	151		172	
CO ₃	--	0		10	0		0	
SO ₄	57	57		75	21		(39)	
Cl	35	41		40	29		21	
F	.6	.7		2.5	.1		.6	
NO ₃	9.1	2		--	5.7		--	
B	.11	.10		.32	.08		--	
Dis. S.	282	312		210	260		--	
Sum	(278)	(300)		(277)	(231)		(233)	
Hardness	(117)	(116)		80	(87)		116	
% Na	52	(51)		(64)	(54)		44	
Micromhos	420	465		--	395		400	
pH	8.1	8.0		8.9	8.0		8.2	
°F	--	55		--	--		--	
Date	3-11-55	12-27-56		11--51	12-27-56		1-29-53	
Depth	85			54			235	
Lab.	DWR	DWR		USN	DWR		GS	
No.	R-566	T5558		--	T5559		6601	

Well number	2N/6-7R1	2N/8-26J1	2N/9-19N1	1N/9-19N3
Constituents in parts per million				
SiO ₂	--	--	--	--
Fe	--	--	0.2	0
Ca	35	39	42	22
Mg	6	5	15	8
Na	43	43	a100	a150
K	2.5	2.6	--	--
HCO ₃	185	177	78	68
CO ₃	0	--	--	10
SO ₄	30	31	212	192
Cl	18	25	70	100
F	.3	.3	4.0	7.5
NO ₃	7.0	2.7	--	--
B ³	0	.10	--	--
Dis. S.	231	234	--	--
Sum	(233)	(236)	(481)	(522)
Hardness	112	(117)	163	88
% Na	45	44	57	79
Micromhos	404	367	--	--
pH	7.6	7.9	7.6	8.3
OF	--	--	--	--
Date	1-4-55	3-11-55	5--37	5--37
Depth	235		185	136
Lab.	SBC	DWR	DPH	DPH
No.	338	R-367	--	--

Well number	2N/9-30B1	2N/9-31N1	4N/5-13R1	1S/5-2C3	
Constituents in parts per million					
SiO ₂	--	--	--	--	17
Fe	0	1.2	--	--	--
Ca	22	46	93	19	18
Mg	8	6	21	4	8
Na	a150	a205	407	25	25
K	--	--	7.0	1.2	1.4
HCO ₃	68	93	498	112	120
CO ₃	10	0	0	0	0
SO ₄	192	390	(11)	12	9
Cl	100	75	535	8	15
F	7.5	9.0	--	.4	.4
NO ₃	--	--	48	11	9.1
B	--	--	--	.04	.07
Dis. S.	--	--	--	146	190
Sum	(522)	(778)	(1,370)	(136)	(162)
Hardness	88	140	318	(63)	(78)
% Na	--	76	73	(45)	(40)
Micromhos	--	--	2,610	248	275
pH	8.3	7.5	7.8	7.8	8.0
°F	--	--	72	--	--
Date	5- -37	6- -37	11-1-53	2-25-54	6-30-57
Depth	--	--	55.0	235	--
Lab.	DPH	DPH	GS	DWR	DWR
No.	--	--	10213	4024	T-821

Well number	1S/5-3B1	1S/5-5A1	1S/7-34F1	1S/9-3D1	
Constituents in parts per million					
SiO ₂	--	--	--	--	--
Fe	--	--	--	0.1	--
Ca	35	21	70	16	14
Mg	11	4	23	5	2.5
Na	53	18	48	a36	a42
K	2.1	.7	4	--	--
HCO ₃	178	114	302	127	129
CO ₃	0	0	0	--	--
SO ₄	50	4.0	54	12	13
Cl	33	5.0	51	15	11
F	.5	.7	.8	3.0	3.2
NO ₃	13	2.0	6.0	--	4
B	.08	0	.10	--	--
Dis. S.	303	166	383	--	--
Sum	(286)	(111)	(406)	(150)	(154)
Hardness	(132)	67	(270)	61	(45)
% Na	(46)	36	(28)	56	(67)
Micromhos	501	191	580	--	--
pH	7.8	7.5	8.4	7.5	8.2
OF	--	--	60	--	78 $\frac{1}{2}$
Date	2-25-54	1-24-57	4-16-52	5-37	4-41
Depth	400	390	112	300	
Lab.	DWR	SBC	DWR	DPH	SBC
No.	4025	4036	1968	--	--

Well number	1S/9-3D1					: 1S/9-5A1
Constituents in parts per million						
SiO ₂	18	--	--	--	20	--
Fe	.1	--	--	--	--	0.6
Ca	13	12	9.5	13	14	26
Mg	2	1	4.6	1	4	3
Na	(a42)	48	48	45	65	a17
K	--	2	2	2.2	3.1	--
HCO ₃	122	122	125	125	115	98
CO ₃	0	0	0	0	0	0
SO ₄	14	6	19	15	5.4	13
Cl	8	16	11	11	25	14
F	2.5	2.8	3.2	3.0	3.0	1.1
NO ₃	--	10	8.3	7.4	7	--
B	.03	.06	.09	.06	.10	--
Dis. S.	145	179	155	162	230	--
Sum	(160)	(158)	(168)	(160)	(204)	(123)
Hardness	42	(34)	43	(36)	(51)	78
% Na	(69)	(76)	70	(71)	(72)	32
Micromhos	--	246	286	277	410	--
pH	8.1	8.0	8.2	7.9	8.2	7.3
°F	--	60	--	--	--	--
Date	2--52	4-15-52	11-24-53	5-7-56	6-19-57	7--37
Depth	300					--
Lab.	USN	DWR	SBC	DWR	DWR	DPH
No.	1447	1834	2912	R-1077	T-783	--

Table 6.---Fluoride content. in parts per million (ppm), of water from wells

Analyzing Laboratory: ESE California Bureau of Sanitary Engineering, DPH California Department of Public Health, DWR California Department of Water Resources, ESB E. S. Babcock and Sons, G Griffin laboratory, GS U. S. Geological Survey, HEM H. E. Merchant, P Pomeroy and Associates, RG R. G. Osborne Laboratory, SEC San Bernardino County Flood Control District, USN U. S. Navy.

Date: The date given is the date the sample was collected. Where the date is preceded by a a it is approximate.

Well No.	Analyzing Laboratory	Fluoride (ppm)	Depth (feet)	Date
1N/5- 2N1	GS	0.6		a4-20-53
12D1	SBC	5.0	300	9-16-56
19B1	DWR	.7	208	12-28-56
	DWR	.8	378	2-24-55
	DWR	.3		2-25-54
22N1	GS	.6	110	2-10-53
34K1	DWR	.3		12-28-56
	DWR	.4		2-24-55
	DWR	.4		2-25-54
	SBC	.3		a1951
34P1	BSE	.3		a1937
	SBC	.3		
34R1	SBC	.2	265	
35N1	SEC	.2		
	SEC	2.6		
1N/6- 4Q1	GS	1.9	726	9-11-53
6E1	GS	.3	316	5-31-53
10F1	GS	1.0	385	9-11-53
13D1	SEC	2.0	613	3-15-56
	DWR	1.9		5-5-54

Well No.	Analyzing Laboratory	Fluoride (ppm)	Depth (feet)	Date
1N/6-25M1	DWR	0.7	512	12-27-56
	DWR	.6		2-25-55
	DWR	.7		2-25-54
	SBC	.5		a1946
	DPH	2.0		a5-?-37
	G	.2		a1937
	SEC	.2		a1937
	BSE	.2		a1937
	SEC	.3		
26M1	SEC	.3	610	4-1-57
28M1	SEC	1.5	260	a1946
29L1	DWR	.8	690	12-28-56
	DWR	1.8		2-25-54
	SEC	1.0		11-23-53
29M1	DWR	.3	414	12-28-56
	DWR	.7		2-24-55
	DWR	.7		2-25-54
30M1	SEC	5.0	260	
31P1	SEC	.5	325	11-23-53
35C1	DWR	.6	630	12-27-57
	DWR	.6		12-27-56
	DWR	.7		2-25-55
	DWR	.7		3-25-54
	SBC	.6		
1N/7-10L1	SEC	.6	264	a1946
	SBC	.5		
10M1	DWR	.6	267	12-27-56
	DWR	.6		2-25-55
	DWR	.7		2-25-54
16P1	DWR	.6	360	5-5-54
	SPC	.4		a1951
20Q1	SEC	1.3	400	a1946
	SEC	1.2		

Well No.	Analyzing Laboratory	Fluoride (ppm)	Depth (feet)	Date
1N/7-21J1	SBC	0.6	274	a1946
21N1	SBC	.6	408	a1946
	SBC	.8		a1937
22E1	SBC	.5		a1946
	SBC	.4		
22L1	SBC	.5	251	a1946
26D1	SBC	.5	250	a1946
	SBC	1.0		
28P2	SBC	.9		a1946
28R1	SBC	1.6		a1946
28R2	SBC	1.5	170	a1946
	SEC	1.5		
30P1	SBC	.6	430	
35D1	DWR	.8	256	12-30-57
	DWR	.7		6-18-57
	DWR	.5		12-27-56
	DWR	.8		2-25-54
	ESB	.6		2-16-51
1N/8- 1D1	GS	14	212	8-7-53
	SBC	14		a1946
	SBC	12		
9L1	DWR	1.4	386	12-27-56
	DWR	5.6		2-25-55
	DWR	6.0		2-26-54
	SBC	4.8		11-24-53
	USN	5.5		a1952
	SBC	5.5		3-17-52
	SBC	5.3		a1941
12G1	GS	14	420	8-7-53
	DWR	10		4-15-52
	SBC	12		a1946

Well No.	Analyzing Laboratory	Fluoride (ppm)	Depth (feet)	Date
1N/8-25R1	DPH	2.0	292	a1937
26G1	SBC	4.0	603	a1946
	SBC	4.0		a4-8-41
	SBC	4.0		a3-9-41
	DPH	3.0		a3-9-41
	SBC	3.5		
31K1	SBC	8.0	455	12-4-55
	SBC	9.0		5-15-55
36A1	DWR	1.6	292	12-26-56
	DWR	1.8		5-7-56
	SBC	1.8		11-10-54
	SBC	1.9		a1951
	SBC	1.7		a1946
	SBC	1.6		a4-8-41
	SBC	1.6		a1937
1N/9- 4N1	RGO	8.0	136	a2-4-42
	G	12		a1937
4N3	DWR	6.0	500	4-15-52
	DWR	8.0		a2-8-52
5M1	SBC	12	60	
5Q1	SBC	12	103	4-?-41
5Q2	DPH	8.5	110	a6-?-37
	BSE	9.0		a1937
5Q3	SBC	7.5	45	a1946
	DPH	9.0		a6-?-37
	BSE	8.5		a1937
	SBC	9.0		a1937
6M1	SBC	13	175	a1946
	DPH	14		a6-2-37
	BSE	14		a1937
	SBC	14		
	SBC	11		

Well No.	Analyzing Laboratory	Fluoride (ppm)	Depth (feet)	Date
1N/9- 7E1	DWR	14	169.0	2-26-56
	DWR	14		2-25-55
	DWR	14		a2-28-51
	SBC	13		a1946
	DPH	13		a6-?-37
	BSE	13		a1937
	G	12		a1937
7H1	SBC	12	110	a1946
	G	10		a1937
	BSE	10		a1937
8D1	SBC	4.0	42.0	a1946
	SBC	9.0		
8D2	SBC	10	70	1-3-55
8F1	SBC	7.5	79	a1946
	BSE	7.1		a1937
	SBC	6.0		
8H2	DWR	12	72.5	2-25-55
8Q2	SBC	10	90	1-3-53
9F1	SBC	11	36	a4-. 41
	G	7.3		a1937
	SBC	7.3		
9M1	DPH	10	60	a7-?-37
	G	12		a1937
9M2	SBC	11	78	
9N1	SBC	11	56.0	a1937
	BSE	11		a1937
	SBC	10		
9P1	SBC	5.3		a4-28-41
9Q1	SBC	11	48.0	a1946
	DPH	8.0		a7-?-37
	BSE	6.0		a1937
	BSE	8.0		a1937
	G	8.8		a1937

Well No.	Analyzing Laboratory	Fluoride (ppm)	Depth (feet)	Date
1N/9- 902	DPH	8.0	21	a7-?-37
10D1	SBC	9.2	301	a4- -41
14L1	G	12	228	a1937
15G1	SBC	10	301	10-11-56
15N1	DWR	6.0	312	5-5-54
	SBC	7.2		a1951
16D1	SBC	9.5	96	a1937
	G	8.5		a1937
16G1	GS	7.0	156.0	9-10-53
16M1	SBC	7.5	110	a1951
17C1	SBC	12		a1946
17E1	SBC	11	130	a1946
	DPH	12		a6-?-37
	BSE	11		a1937
	G	12		a1937
	SBC	10		
17G1	DWR	8.0	85	7-1-57
17J1	SBC	6.0	114	11-10-54
17J2	SBC	5.0	85	a1946
	DPH	7.5		a6-?-37
	BSE	7.5		a1937
	G	5.1		a1937
	SBC	4.0		
17J6	SBC	5.0	106	2-6-52
	SBC	5.5		a1951
	DPH	9.0		
	BSE	7.5		
	G	5.1		
	SBC	7.5		
19A1	G	12		1937

Well No.	Analyzing Laboratory	Fluoride (ppm)	Depth (feet)	Date
1N/9-20A1	DWR	1.4	52	12-27-56
	DWR	4.8		2-25-55
	DWR	5.0		2-26-54
20R1	SBC	4.0		a4- -41
	HEM	4.0		a1941
	DPH	4.0		a6-?-37
	BSE	4.0		a1937
	G	3.7		a1937
	SBC	3.9		a1937
21C1	BSE	6.5	42	a1937
	G	6.5		a1937
	SBC	6.5		a1937
21J1	SBC	6.8	200	a1951
	SBC	7.0		a1946
	DPH	9.0		a5-?-37
	SBC	7.5		
21R1	DWR	5.0	185	a2-6-52
	SBC	8.0		a1946
	SBC	6.9		a1937
22B1	SBC	13	309	a1946
	SEC	14		a4- -41
	HEM	14		a1941
	G	14		a1937
22D1	SBC	9.0		a1937
22D5	DPH	9.0		a7-?-37
22D6	DPH	9.0		a7-?-37
	SBC	3.9		a1937
22E1	SEC	7.0	87	a1946
	SBC	8.2		a4- -41
	BSE	6.9		a1937
	SEC	7.0		
22E2	BSE	9.0	64	a1937
	G	9.0		a1937
22E3	G	7.8	127	
	DPH	3.8		11-7-51

Well No.	Analyzing Laboratory	Fluoride (ppm)	Depth (feet)	Date
1N/9-26E1	SBC	11	133.7	a1946
	G	12		a1937
	SBC	10		
26F1	G	12	144	
26G1	SBC	6.0	550	8-3-55
26N1	BSE	9.0	162	a1937
	BSE	5.5		a1937
	G	8.8		a1937
27C1	SBC	7.0	145	12-14-54
	SBC	7.0		a1946
	SBC	6.8		a1937
	BSE	6.3		a1937
	G	6.3		a1937
27C2	BSE	6.8	350	a1937
	G	6.8		a1937
	SBC	6.9		a1937
27D1	BSE	6.0	120	a1937
	SBC	6.6		a1937
27K1	DPH	6.0	165	a7-?-37
	SBC	5.7		a1937
28D1	SBC	2.3		a1937
	SBC	2.3		a1937
29F1	SBC	18	380	a4- 41
	HEM	18		a1941
	DPH	15		a6-?-37
	G	16		a1937
	SBC	16		a1937
29R1	SBC	5.3	121	a4- 41
	DPH	6.5		a6-?-37
	SBC	6.0		a1937
	SBC	6.5		
	SBC	6.0		

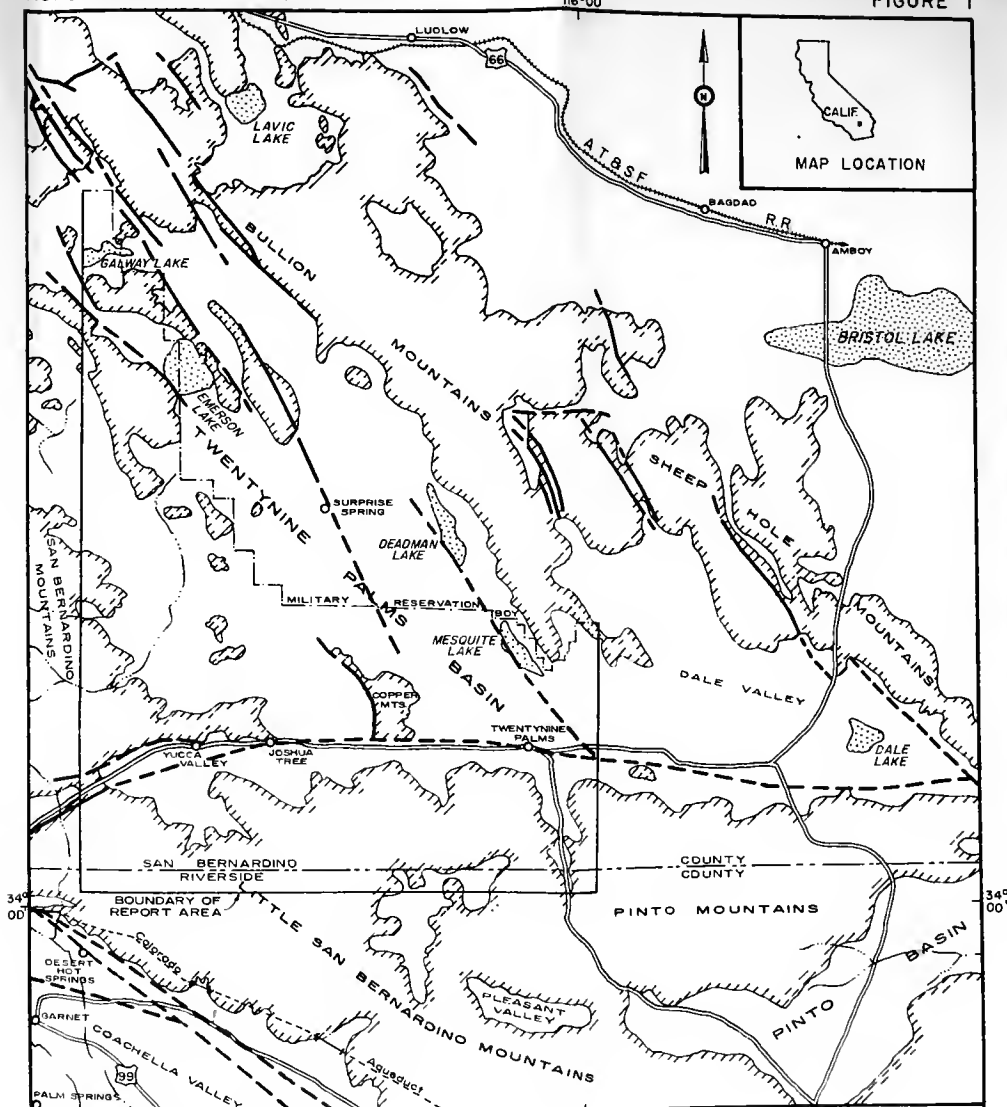
Well No.	Analyzing Laboratory	Fluoride (ppm)	Depth (feet)	Date
1N/9-30K1	SBC	13	171	a1946
	DPH	12		a6-?-37
	BSE	12		a1937
	G	12		a1937
	SBC	12		a1937
30Q1	DPH	4.0	143.5	a5-?-37
	BSE	4.0		a1937
	G	4.2		a1937
	SBC	4.2		a1937
	SBC	4.0		
31A1	DWR	1.6	350	6-19-57
	DWR	1.6		5-7-56
	DWR	2.0		2-25-55
	DWR	2.0		2-26-54
	GS	1.6		9-10-53
31A2	DWR	2.5	117	12-26-56
	DWR	3.0		2-25-55
	DWR	2.8		2-26-54
	SBC	2.6		a1951
	SBC	5.0		
31A3	DWR	1.7	115	2-7-52
	DPH	4.0		a6-?-37
	BSE	4.0		a1937
	BSE	5.0		a1937
	G	3.5		a1937
31C1	DWR	1.3	306	12-17-57
	DWR	2.0		6-19-57
	DWR	1.8		5-7-56
	DWR	2.0		2-25-55
	DWR	2.0		2-26-54
	DWR	1.7		2-7-52
	SBC	1.7		a1951
	SBC	1.6		a1946
	SBC	1.6		a4-8-41
	SBC	1.6		a1937
	SBC	1.4		
32F1	DPH	1.5		a2-?-37
32G1	SBC	1.2	68	

Well No.	Analyzing Laboratory	Fluoride (ppm)	Depth (feet)	Date
1N/9-32H1	SEC	2.8		a1937
32H2	DPH	3.0	125	a6-?-37
	BSE	3.0		a1937
	G	2.7		a1937
	SEC	3.0		
32H3	DPH	1.8	35	a5-?-37
	BSE	1.8		a1937
	BSE	2.0		a1937
	G	2.0		a1937
32H5	BSE	3.0	52	
	G	2.7		
32J1	SEC	1.5		a1937
32R1	SEC	1.2	75	a1946
	DPH	1.1		a5-?-37
	BSE	1.0		a1937
	BSE	1.1		a1937
	G	1.2		a1937
	SEC	1.1		
	SEC	1.1		
33F1	RGO	.01	175	a9-8-53
	DPH	1.5		a6-?-37
	BSE	1.4		a1937
	G	1.4		a1937
	SEC	2.7		a1937
33F2	DNR	1.6	285	4-15-52
	RGO	.01		a8-11-39
33F3	SEC	2.0	65	a1946
	SEC	1.8		a4-27-41
	DPH	1.5		a6-?-37
	SEC	1.5		a1937
	SEC	2.0		a1937
	BSE	2.2		a1937
	BSE	1.5		a1937
	G	1.5		a1937
33J1	BSE	3.6	16	a1937
	BSE	4.2		a1937
	G	4.6		a1937

Well No.	Analyzing Laboratory	Fluoride (ppm)	Depth (feet)	Date
1N/9-34A1	DWR	0.7		12-26-56
	DWR	6.4		2-25-55
	DWR	7.0		2-26-54
	G	5.6		a1937
35F1	SBC	22	253	a1946
	DPH	20		a6-?-37
	BSE	20		a1937
	SBC	20		a1937
	SBC	19		
35N1	DWR	2.0	244.2	12-26-56
	DWR	5.3		5-7-56
	G	6.4		a1937
	SBC	6.4		a1937
2N/5- 1H1	DWR	.7	85	12-27-56
	DWR	.6		3-11-55
	GS	.8		2-25-53
	P	.8		a12-12-51
	USN	2.5		a11-?-51
2N/6- 6D1	DWR	.1	54	12-27-56
	P	1.1		a12-12-51
	USN	2.5		a11-?-51
7R1	DWR	.3	235	3-11-55
	SBC	.3		1-4-55
	GS	.6		1-29-53
2N/8-26J1	SBC	4.5	185	a1946
	DPH	4.0		a5-?-37
	BSE	4.0		a1937
	SBC	4.0		a1937
	SBC	3.5		
2N/9-19N1	SBC	12	78.0	a1946
	DPH	7.5		a5-?-37
	G	12		a1937
19N3	SBC	10	136	6-30-57
29N1	G	7.0		a1937
30A2	G	7.0	40	a1937

Well No.	Analyzing Laboratory	Fluoride (ppm)	Depth (feet)	Date
2N/9-30B1	G	7.0		a1946
	G	8.8		a1937
	DPH	7.5		a1937
	SBC	7.0		
30Q2	SBC	8.8	35	a1937
	BSE	7.5		a1937
31C1	G	8.0		a1937
31E1	SBC	4.5	68	a1946
	G	5.1		
31J2	G	8.0	30	a1937
31N1	SBC	7.0		a1946
	DPH	9.0		a6-?-37
	SBC	7.9		a1937
	SBC	8.8		
32N1	G	7.9	15.6	a1937
1S/5- 2C3	DNR	.4	235	6-20-57
	DNR	.1		12-28-56
	DNR	.4		2-24-55
	DNR	.4		2-25-54
3B1	DNR	.5	400	2-25-54
5A1	SBC	.7	390	1-24-57
1S/7-34F1	DNR	.8	112	4-16-52
1S/8-12Ds	BSE	3.2	Spring	
32C1	BSE	.2	25	a1937
	SBC	.2		

Well No.	Analyzing Laboratory	Fluoride (ppm)	Depth (feet)	Date
1S/9-3D1	DWR	3.0	300	6-19-57
	DWR	2.5		12-26-56
	DWR	3.0		5-7-56
	SBC	3.2		11-24-53
	DWR	2.8		4-15-52
	USN	2.5		a2- -52
	SBC	2.8		a1951
	SBC	3.2		a1946
	USN	3.2		a4-9-41
	SBC	3.2		a4-?-41
	DPH	3.0		a5-?-37
	BSE	3.0		a1937
	BSE	3.2		a1937
	G	2.5		a1937
	SEC	3.4		a1937
	SEC	2.9		a1937
	SEC	4.0		a1937
	SEC	4.4		
5A1	SBC	1.1		a1946
	DPH	1.1		a7-?-37
	BSE	1.1		a1937
	BSE	1.0		a1937
	G	1.0		a1937
	SEC	1.2		

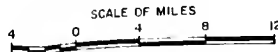


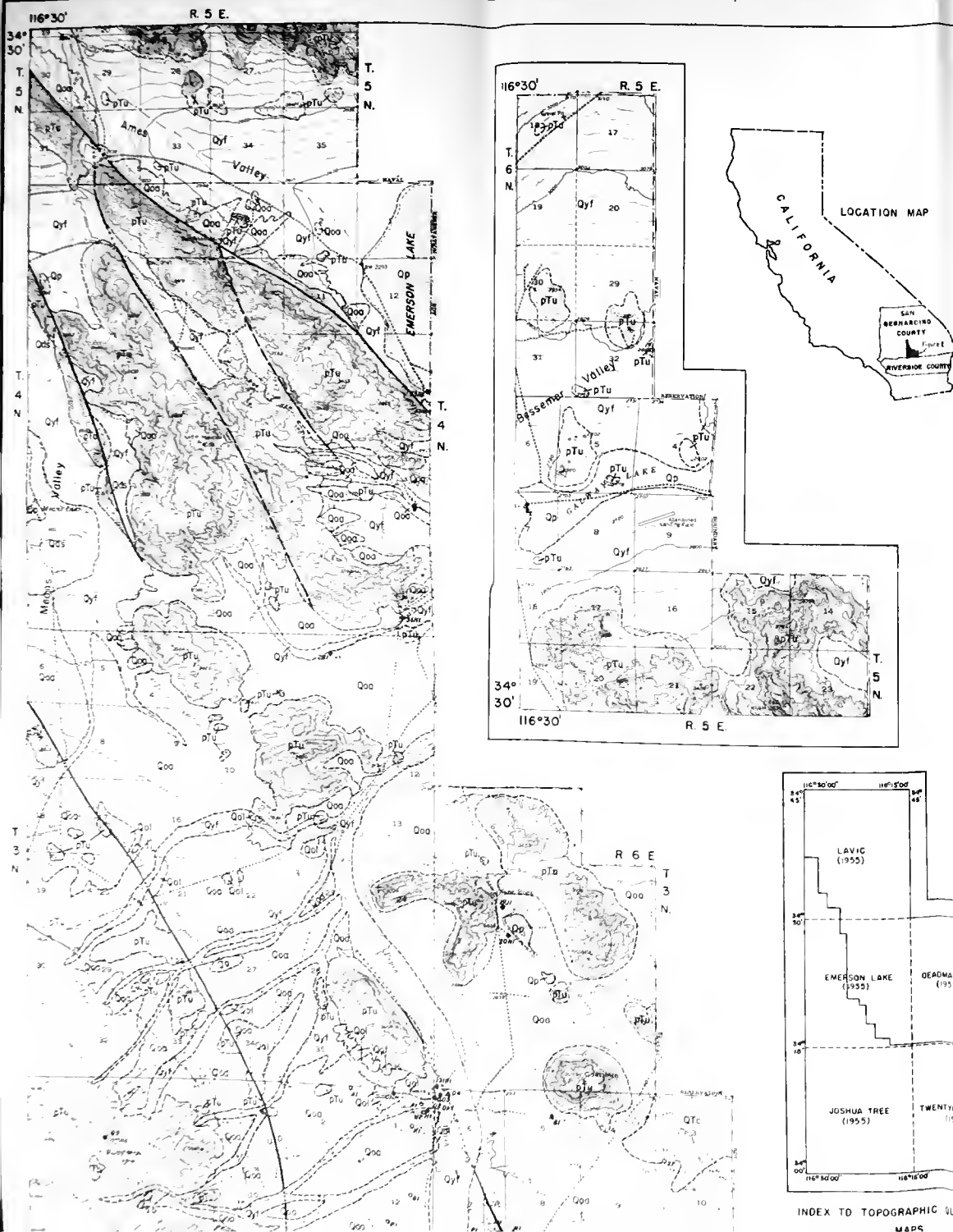
Base map and fault pattern largely after geologic map of California (Jenkins, 1938)

LEGEND

- VALLEY AREA
- MOUNTAIN AREA
- FAULT (DASHED WHERE INFERRED)

MAP OF PART OF SOUTHERN CALIFORNIA SHOWING AREA COVERED BY THIS REPORT





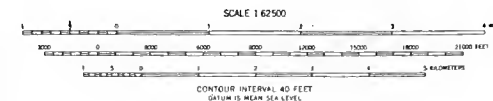
STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

FEDERAL-STATE COOPERATIVE GROUND WATER INVESTIGATIONS

PREPARED BY U. S. GEOLOGICAL SURVEY

MAP OF THE YUCCA VALLEY-TWENTYNINE PALMS AREA, CALIFORNIA SHOWING RECONNAISSANCE GEOLOGY AND LOCATIONS OF WELLS AND SPRINGS

(INCLUDES WARREN, COPPER MOUNTAIN, AND TWENTYNINE PALMS VALLEYS AND PARTS OF MEANS, AMES, SURPRISE, AND BESSEMER VALLEYS)



EXPLANATION

UNCONSOLIDATED DEPOSITS

Qyf

Younger fan deposits
Unconsolidated poorly
sorted gravel, sand,
silt, and mudflow
debris, locally derived,
largely above water
table, yield little
water to wells

Qls

Lakeshore deposits
Unconsolidated gravel
and sand and some
silt; above the
water table

Qp

Playa deposits
Unconsolidated silt,
and clay beneath
small lakebeds;
yield virtually no
water to wells

Qds

Dune sand
Unconsolidated sand,
actively drifting,
except where
anchored by
vegetation; largely
above the water
table

Qaf

Older fan deposits
Moderately cemented to
moderately indurated
boulder, gravel, sand,
and breccia, yield
little water to wells

Qaa

Older alluvium
Unconsolidated generally
weathered gravel, sand,
silt, and clay where
saturated yields water
freely to wells

Qol

Old lacustrine deposits
Silt, clay, fresh-water marl, and
lime-cemented gravel, sand, and
silt, yield little water to wells

Qtc

Continental deposits
Silt, sand, clay, gravel, and small
amounts of limy cement, yield
water freely to wells

CONSOLIDATED ROCKS

Tb

Basalt
Extrusive amygdaloidal olivine basalt,
yields virtually no water

pTu

Approximate contact between rock units

— U — ? — — —

Fault
Dashed where approximately located,
dotted where concealed, questioned
where doubtful. U, upthrown side;
D, downthrown side. Arrow shows
direction of lateral movement.

Strike and dip of beds

Domestic, stock, test, or unused well

Irrigation or public-supply well with
pump of 5 horsepower or more

Flowing well

Destroyed or dry well

Spring

Intermittent spring

Except as indicated in text, letter
after well indicates position in
section thus:

D	C	B	A
E	F	G	H
M	L	K	J

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